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'All-Industry Cabinet' Is Goal of NWAHACA

CLEVELAND, Nov. 16 — An "All-Industry Cabinet" wherein effective communications between manufacturers, wholesalers, and contractor-dealers can ben implemented is the goal of a recommendation accepted here by the board of directors of the National Warm Air Heating & Air Conditioning Association at its annual convention here.

Preliminary step, the association feels, will be the formation of a dealer advisory council and a wholesaler advisory council within NWAHACA. Then members will be elected from the councils to serve on the cabinet.

"Northamerican Heating & Airconditioning Wholesalers will be asked to select three members of its board of trustees to serve on the all industry cabinet," states one NWAHACA source, and other pertinent wholesaler groups will be contacted.

Further reports on NWAHACA's annual convention will appear in future issues of the NEWS.

While full details of the plans recommended by NWAHACA's study committee chaired by Paul M. Augenstein, Airtemp president, were not available, the heating association's spokesman emphasized that the all-industry cabinet will be advisory only. "It will have authority to affect the operations or policies of any segment of the industry. There is no intention to limit, restrict, or influence the activities of any other industry association."

At the beginning, dealer representation on the advisory council will have to be obtained from those already members of NWAHACA, it was reported, although it is hoped that a way will be found for regional dealer groups to establish communications with the council.

Sept. Gas Heat Sales Up 13%, GAMA Reports

NEW YORK CITY — A marked increase in home modernization and the arrival of cool weather have combined to boost September factory shipments of residential gas central heating equipment 13% above the August level, the Gas Appliance Manufacturers Association reports.

GAMA's monthly telegraphic survey of manufacturers reveals that 145,794 gas-fired furnaces, boilers, and conversion burners were sent to market during the month, compared to the 129,-035 reported for August.

The new figures have given some observers reason to believe that the gas industry's

(Continued on Back Page, Col. 1)

Straus-Duparquet Buys Brooklyn Contractor

BROOKLYN—Purchase of M & R Air Conditioning Corp., well known contracting firm here, by Straus-Duparquet of New York City, world's largest restaurant supply house, has been confirmed by officials of the contracting firm.

M & R is now being operated as a wholly-owned subsidiary by the same management who previously owned the firm: Ted Reina as president and Ed Merenda as vice president, secretary, and treasurer.

"We've merely transferred the assets and liabilities of M & R to Straus-Duparquet in exchange for stock in the latter company," explains Merenda. "Otherwise we're operating just as before," he added.

Westinghouse To Expand All Air Conditioning Lines

1960 Sales 23% Ahead of 1959 Volume

HOLLYWOOD, Fla. — With 1960 sales running 23% higher than 1959, the Westinghouse Air Conditioning Div. in 1961 will emphasize product expansion in all three markets—residential, commercial, and industrial, the annual Westinghouse air conditioning distributor management conference here was told by R. K. Serfass, division general manager.

"Profitable Growth of the Westinghouse Distributor Organization" was the theme of the meeting of the more than 200 distributors that reviewed the company's 1961 product line and its supporting marketing programs. In addition to Serfass, the division's top management, including R. N. Campbell, vice president; D. R. Meckstroth, marketing manager; and regional sales managers acted as host for the meeting.

Serfass said that in line with the product expansion policy, 33 new models in five product lines will become available to distributors between now and the end of February. (Detailed descriptions of the new products were not made immediately available, but such details will be published in the NEWS when they are released).

Serfass, in reviewing the division's outstanding performance in 1960, indicated the highest percentage improvement was in the sale of electric heating equipment and heat pumps, although there were increases in all other lines, including substantial improvements in both residential and industrial air conditioning equipment. He added that sales in foreign countries, through the Westinghouse International Div., have also improved and there is at present a substantial backlog of orders in that area.

The general manager indicated that several ideas were the basis of the company's product program:

"1. We are devoted to a plan of continuous development of new products for our distributors. Fifty new or improved models were introduced during 1960.

"2. The components, com-

(Continued on Page 21, Col. 1)

'60 Sales Set Record; Copeland Sees Better '61

SIDNEY, Ohio—Copeland Refrigeration Corp.'s sales and earnings for the fiscal year ended Sept. 30 established new records, F. J. Gleason, president, reported. 1961 is expected to be another record year.

Sales of $39,561,962 in the 1960 fiscal year represent an increase of 13% over sales of $35,039,137 in 1959. Net income was $2,006,825, or $2.50 a share, an increase of 41% over the $1,427,003, or $1.78 a share, reported for fiscal 1959.

Fiscal 1961 should again be a record year for the company

(Continued on Page 4, Col. 5)

Outside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Shannon Has It Made

Immensely interesting fellow, with the intriguing name of Shannon Yarborough, is a kingpin of refrigeration and air conditioning activities in Haiti.

You think you've got problems as a contractor, dealer, or serviceman?

Follow Shannon (a NEWS subscriber) around as "Dope" did recently, and study *his* problems.

He's all three, and *all-important*, to Haitian users of refrigerated products.

Shannon guarantees that every refrigeration-cycle product in Haiti—from tourist hotel air conditioning, beer coolers on the nightlife circuit, commercial fish freezing enterprises, and even ice cream makers and Coca Cola coolers for American military delegations — WILL WORK, all around the clock.

In his sense of duty, Shannon is like a medical doctor. He answers hurry-up calls at all hours of the day or night—no matter where he is or what he's doing.

His strong sense of personal obligation in this regard has its rewards.

SHANNON YARBOROUGH (right) with Ernie Tramposh, Kansas City wholesaler (and daughter).

"In New York, as a one-among-many serviceman, I had no status. I was just another number in the telephone book," he confided. "Here, I am Mister Shannon."

These service calls he makes might stump many an American. Haiti's registered 220 volt electricity fades down to 90 frequently, and disappears altogether often.

Telephone calls don't go through sometimes. Shipments

(Continued on Page 10, Col. 1)

Results of Cooling Tests on Experimental Valance System Presented at IBR Meeting

ABSECON, N. J.—A progress report describing results of cooling tests on an experimental valance system in the I-B-R Hydronic Research House this summer was presented at the semiannual meeting of the Institute of Boiler & Radiator Manufacturers by Prof. Warren S. Harris.

The valance system studied is one designed to heat the home with hot water in cold weather and to cool it with chilled water in hot weather. The same valance units are used for heating and cooling.

Prof. Harris's report covered cooling only. Heating performance of the system is now being investigated.

The I-B-R Research House is a tri-level house which was built in 1959 at Urbana, Ill. by the institute. It is a fully instrumented "field" laboratory in which hydronic heating and cooling equipment performance may be studied under actual operating conditions.

Studies in this house are made under the terms of a cooperative research agreement with the University of Illinois. Professor Harris has been in charge of the I-B-R research program since its inception in 1940.

Regarding the valance units, it was pointed out that they are located along the outside walls of the rooms near the ceiling level. All air circulation, both summer and winter, is by gravity.

The valance installation was a three-zone system with all units

(Continued on Page 2, Col. 4)

Jamison To Market Lehigh 'Air Isolator'

HAGERSTOWN, Md. — The Jamison Cold Storage Door Co. here has been named by the Lehigh Mfg. Co., a division of Lehigh, Inc., Easton, Pa., to handle the sales, distribution, and service of the newly-developed "air isolator" manufactured by Lehigh.

L. E. Hammond, president of Lehigh, explained that the new equipment provides a curtain of moving air which acts as an isolator yet allows free access be-

(Continued on Page 4, Col. 5)

'Unable To Determine Nature, Extent . . .'

Nibco Denies FTC Illegal Price Fixing, Discriminatory Allowance Charges

WASHINGTON, D. C.— Nibco, Inc., Elkhart, Ind., a manufacturer of valves, fittings, and related items used by plumbers and steamfitters, has denied Federal Trade Commission charges of illegally fixing and maintaining the resale prices of its products, and favoring some customers with discriminatory promotional allowances.

Nibco asserts that it is "unable to determine the nature and the extent of the allegations and the violations charged against it" in the FTC's Aug. 10 complaint, and therefore must "deny each and every allegation and statement."

The company requests a prehearing conference between counsel at a mutually convenient time, and says it reserves the right to object to the legal sufficiency of the complaint.

As previously reported, the FTC's two-count complaint stated that Nibco sells its products nationally to many customers, including wholesalers and manufacturer's representatives.

The latter are independent businessmen, who are under contract with Nibco and purchase from it for resale to wholesalers, the FTC said. They account for approximately 85% of the company's total sales, which exceed $20 million annually, according to the commission.

Alleging violation of Sec. 5 of the FTC Act, Count I of the complaint charges that Nibco has established and maintains a policy whereby it fixes certain specified prices and discounts at which its products are to be resold by the manufacturer's representatives.

These prices and discounts are disseminated by published price lists and other means, and the representatives are required to adhere to them, the complaint says.

Count II of the complaint charges Nibco with paying promotional allowances to some of its customers but not making them available on proportionally equal terms to all other competing customers, as required by Sec.2(d) of the Robinson-Patman Amendment to the Clayton Act.

IBR Research Progress Report--

(Continued from Page 1)

on each zone series connected. One zone served each level of the house.

The control system used during the cooling tests consisted of a thermostat on each zone which controlled the operation of the zone valve. As long as any zone required cooling, the circulating pump was in operation and the chiller operated to maintain a chilled water temperature of approximately 40° F.

"Whenever the same unit is used to both heat and cool a room, one is faced with the problem of deciding whether to select the unit on the basis of the calculated heating load, calculated cooling load, or some combination of these two calculated loads," it was noted.

In selecting the valance units for the I-B-R Hydronic Research House, the following procedure was followed:

Step 1. Both design heating and design cooling loads were calculated for each room using I-B-R Guides H-20 and C-30, respectively.

Step 2. The length of wall available for the location of valance units was determined for each room.

Step 3. The room having the highest calculated heat loss per foot of available wall (Step 2) was determined. In this case it was found to be the living-dining area.

Step 4. Using a chilled water temperature of 40°, the length of valance assembly required to provide cooling equal to the calculated design cooling load of the room determined in Step 3 was determined. In this case it was found that using all the available wall space, only 90% of the calculated cooling load could be taken care of.

Step 5. Using the length of valance assembly determined in Step 4, an average water temperature was determined which would result in a heating output of the installed radiation equal to the calculated design heating load of the room. This was then used as the design water temperature for the entire system. In this case the water temperature was found to be 183°.

Step 6. Using the design water temperature determined in Step 5, the length of valance assembly required in each room of the house to satisfy the design heating load was determined. This provided a system which, according to calculated loads, would be in proper balance during the winter months.

Step 7. Using a design water temperature of 40°, the cooling capacity of the valance assemblies selected in Step 6 were determined and compared with the calculated design cooling loads.

Selecting Valance Assembly Lengths

This method of design resulted in the selection of valance assembly lengths such that the system should be in proper balance in the winter and in approximate balance during the summer, it was stated.

The tests were designed to indicate the effectiveness of the valance system in producing a comfortable cooling environment in a residence. Winter performance is now being observed and will be reported to the institute at the annual meeting next June.

The evaluation of the valance system for cooling made by the research staff was based on a scale of: 1—excellent; 2—good; 3—satisfactory; 4—poor; 5—unsatisfactory.

The staff rated the valance system as follows:

Performance—1.7, very good.

Installation and design—3.2, acceptable but room for improvement.

"A point by point evaluation should help clarify the reasons for the above evaluations," the report said.

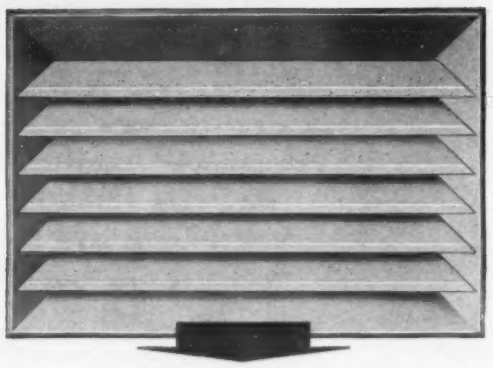
"Air Temperature in Rooms (temperature of the air in each room 30 in. above the floor and

The extreme flexibility of

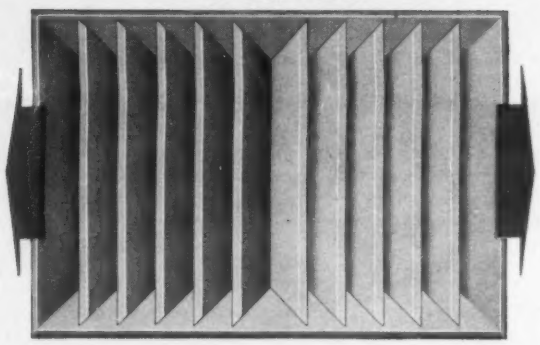
Type M Multi-Pattern Diffusers

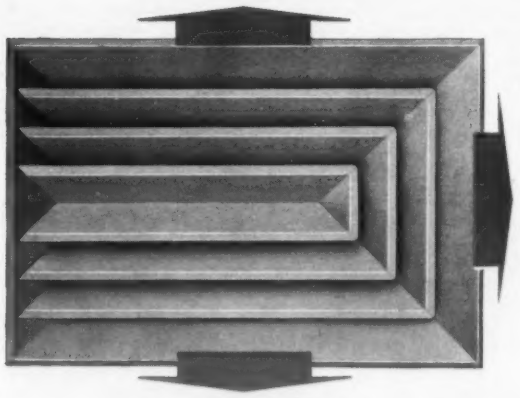
means custom-selected air distribution

TYPE M 1-WAY BLOW

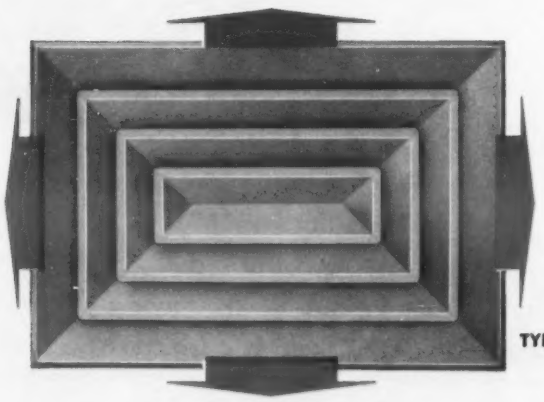


TYPE M 2-WAY BLOW





TYPE M 3-WAY BLOW



TYPE M 4-WAY BLOW

Ideal conditions for the placement of ceiling diffusers do not always exist. Walls, partitions, exposed beams, supporting columns, light fixtures . . . big offices, small offices, corridors . . . are some of the factors that can contribute to the problem of correctly selecting and locating air distribution outlets.

With Tuttle & Bailey Type M Diffusers . . . you can select units that will distribute air in a one-, two-, three-, or four-way pattern . . . and you can select from a wide range of square and rectangular sizes. An added advantage . . . if and when requirements change in the conditioned space, it is an easy matter to install a core with a different air pattern arrangement.

T & B Type M Diffusers are attractively styled and can be furnished with four margin styles . . . beveled, flat, flush, or drop-collar . . . designed for various types of ceiling mountings.

For complete details, see your nearest Tuttle & Bailey Representative or write us direct.

TUTTLE & BAILEY

division of Allied Thermal Corp. New Britain, Connecticut

Tuttle & Bailey Pacific, Incorporated, City of Industry, California

the degree to which it was held at a constant value): Rating 1.8 or very satisfactory.

"There were cyclic temperature variations due to thermostat characteristics and sun effects, but these were no larger than would be expected with any cooling system and were not sufficient in magnitude to be really objectionable.

"Air Temperature Gradient (floor to ceiling air temperature differences in each room): Rating 1.4 or very satisfactory.

"Ceilings were warmer than when using the fan coil units, but there was little or no difference between the two in the zone extending from the floor to the 5-ft level. The higher temperatures near the ceiling did not have an adverse effect on one's feeling of comfort.

'Room Temperature Balance'

"Room Temperature Balance (differences in air temperatures between rooms). Rating 2.8 or satisfactory.

"There was a maximum temperature difference from room to room on any one zone of about 5°. The temperature difference was probably no greater than would be expected with other year-round systems using the same type of control.

"Air Movement in Rooms: Rating 1.6 or very satisfactory.

"In a few locations, a person sitting or standing directly under the unit could detect a slight draft. In all other locations there was no noticeable air movement.

"Relative Humidity: Rating 2.2 or good.

"Re-evaporation from surface resulted in high indoor humidity during morning hours and periods of light load.

"Removal of Water from House (provision in the design of the units for collecting condensate and removing it from the house): Rating 3.7 or poor.

"The water-way of the trough and drain tube was small in cross section and shallow. While no trouble was experienced in the test installation, it appeared that complete or partial stoppage of this system might occur and cause the trough to overflow. Some people might object to allowing the condensate to drip outside the house. To collect it from all units and conduct it to a drain would require an extensive drain system.

Quietness Rating

"Quietness: Rating 1.2 or excellent.

"No noise of any kind was observed originating in the valance units.

"Appearance: Rating 2.0 or good.

"In most instances, the units can be made to harmonize with the room decor by proper painting or papering.

"Cleanliness: Rating 1.2 or excellent.

"No dust patterns were observed although it must be admitted that the test period was of short duration for this type of observation.

"Ease of Installation: Rating 2.7 or satisfactory.

"Comparable to a baseboard system except for installation of trough. There is room for some improvement in the design of the trough and the method of joining sections."

York-Shipley Elects Brenneman President

YORK, Pa.—Lavern H. Brenneman was elected president and general manager of York-Shipley, Inc. at a special meeting of the board of directors.

L. Brenneman

This was reported in a letter written to company employes by Samuel H. Shipley, Sr., newly-elected chairman of the board, who held the post of president during the past 20 years.

Brenneman joined the Roosevelt Oil petroleum division as an accountant in 1936.

With the purchase of York Oil Burner Co. in 1938 by the Shipley interests, he became treasurer of the company. He was elected to the board of directors in 1941 and in 1943 became vice president in charge of war work. At the end of World War II in 1946, he was elected executive vice president.

Emerson Radio Leases Plant for Cooling

JERSEY CITY, N. J.—Emerson Radio & Phonograph Corp. has leased a newly-constructed one-story plant in Woodbridge, N. J. to serve as a new home for the company's air conditioner operations, it was announced by Benjamin Abrams, president.

Abrams stated that the plant, which comprises an area of 115,000 sq ft, will house Emerson's air conditioner laboratory, engineering, and manufacturing operations. It is situated on a 9-acre tract of land with provision for expansion if required.

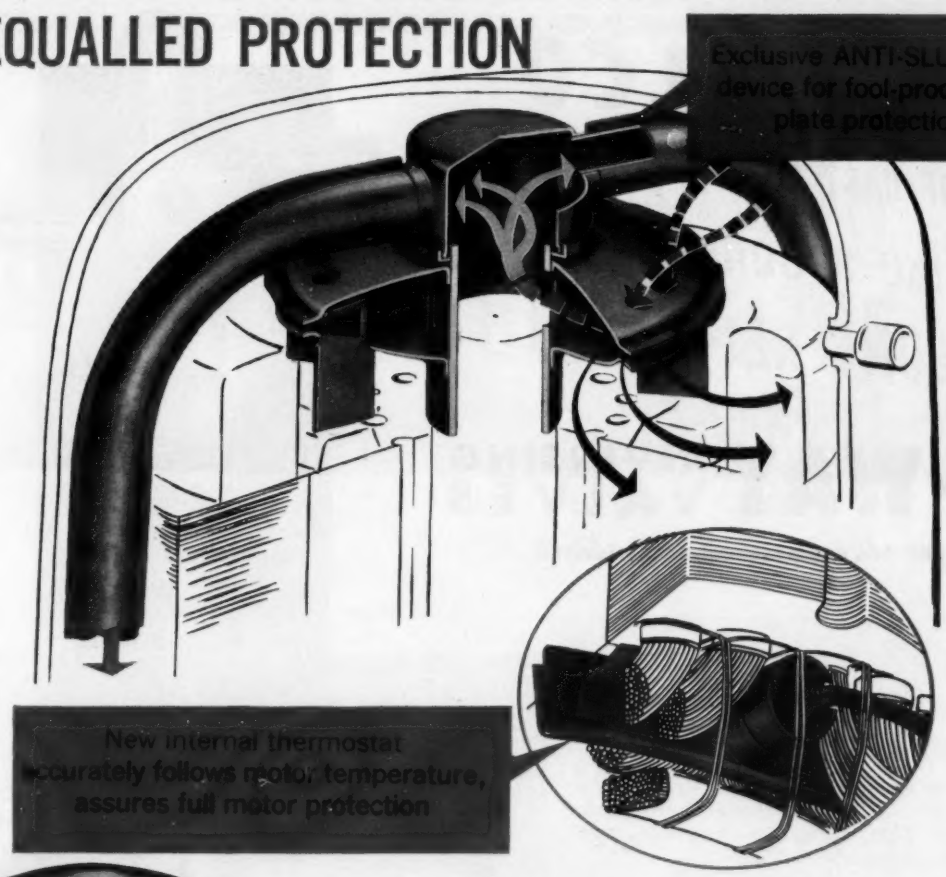
The new facility, Abrams said, "will make available to us the most modern and efficient type of facility for the growing requirements of this segment of our business.

"In addition, it will free a considerable area in our Jersey City plant which is needed to provide additional facilities for the expanding demands of our Technical Products Div. and our Consumer Products Div. now housed at this location."

Thermoelectric News from Tecumseh

Included in the variety of products manufactured by the Ohio Semiconductor Division of Tecumseh, is a complete line of solid state devices based on the Hall effect. These Halltrons may be used as multipliers, modulators, control devices, magnetic field measurement, amplifiers, converters, and many other applications. Many of these devices are available from stock and our engineering department will be happy to assist on your specific applications. Interested companies are invited to contact Tecumseh for additional information on the application of these devices or other products in the field of thermoelectricity.

UNEQUALLED PROTECTION


Exclusive ANTI-SLUGGING device for fool-proof valve plate protection.
New internal thermostat accurately follows motor temperature, assures full motor protection

CL SERIES COMPRESSORS
CL25—rated at 30,500 BTU
CL30—rated at 38,500 BTU
CL35—rated at 43,500 BTU
CL40—rated at 50,500 BTU

WIDER SELECTION . . .
WITH TECUMSEH'S NEW CL SERIES COMPRESSOR

This 2-pole, R-22 line of CL compressors provides Tecumseh's air conditioning and heat pump customers with unmatched advantages. Dual internal protection is furnished on the 3, 3½ and 4 H.P. models (the 2½ H.P. model includes the centrifuge only) as standard equipment. With normal charge and runs, the fool-proof Anti-Slug Device prevents oil or liquid refrigerant from reaching the valve plates. The internal thermostat is built *into the motor winding* to give instantaneous and accurate sensing of motor temperature at the most critical point and therefore removes compressor from the line at a safe temperature level. Both devices are *always* operative when the compressor is running and are unaffected by outside variables. In combination, they offer compressor protection unequalled in the field. This broad line, offered to Tecumseh customers for the first time, provides a closer match to your requirements. A full year of successful field tests have proven the new CL Series your best compressor buy. Investigate it today.

forty million compressors in the field

TECUMSEH PRODUCTS COMPANY
MARION, OHIO
TECUMSEH, MICHIGAN

FOREIGN OPERATING DIVISION: Tecumseh, Michigan
CANADA: Tecumseh Products of Canada, Limited, Ashland and Wilton Avenues, London, Ontario

Heat Pumps Still Selling at 2-a-Week Pace In Portland

PORTLAND, Ore.—Since the Jan. 18 NEWS report, 68 new heat pump installations have been made on the lines of Portland General Electric Co., the utility here. Forty-eight of the installations were commercial applications, 20 were residential, according to Bob Seaberg, air conditioning sales engineer for the utility.

"This means that heat pumps continue to sell at about two per week," stated Seaberg.

The first report on Portland's heat pump activity appeared in the special heat pump issue, Sept. 21, 1959. At that time, the power company indicated 29 commercial and 36 residential heat pump jobs were on its lines.

A progress report published in the NEWS in January showed the addition of 21 residential and 9 commercial heat pumps in the area served by Portland General Electric.

The latest figures include four new bowling alleys, two of these with 32 lanes each, according to the sales engineer.

A 6-page booklet, "Basic Recommendations for a Satisfactory Heat Pump Installation," is supplied by the utility for prospective heat pump customers. "We feel the booklet will help upgrade installations and develop a good dealer-customer relationship."

1961 prediction? "At PGE we are hoping the installation rate will change from two to three and that the number of units sold will double."

So. Dakota Court Denies Holland Furnace Motion

SIOUX FALLS, S. D.—A motion by Holland Furnace Co. to dismiss the action brought to cancel the company's license to do business in South Dakota has been denied by Circuit Judge George Rice, it was reported Oct. 26.

In a memorandum decision, the judge indicated he would allow 15 days for the company to serve and file its formal answer to the complaint.

Atty. Gen. Parnell Donohue filed the complaint here, charging that the company conducted a pattern of unethical practices.

Also cited in the complaint was an order of the Federal Trade Commission directing the company to cease and desist.

Two civil actions here have resulted in judgments voiding contracts with the company.

New Orleans Contractors Consider Law Suits over BBB Advertisement

NEW ORLEANS—The local district attorney's office has been consulted by several air conditioning and refrigeration contractors in their efforts to file law suits against the Better Business Bureau.

The proposed criminal libel suits, now being drawn up, were designed to answer newspaper advertisements run by the BBB six weeks ago.

In the ads, the bureau warned readers to call the BBB for advice before calling any contractor or repairman in the air conditioning and refrigeration trade. It was stated that "serious, serious" complaints had been received by the BBB office.

The president of two Louisiana contractor groups, Philip J. Thompson, said recently he had consulted Dave McNeill, assistant district attorney. Because of pressing grand jury activities and other business, Thompson said, it might be a "few days" before McNeill "can get the ball rolling."

Thompson added that the proposed lawsuits would carry the names of his two organizations—the Louisiana Refrigeration & Air Conditioning Contractors, Inc., and the Master Refrigeration & Air Conditioning Association.

At the same time, the manager of the local BBB office said he was "still waiting for the alleged lawsuits to materialize."

"I haven't heard anything about them in several weeks," said James Barr.

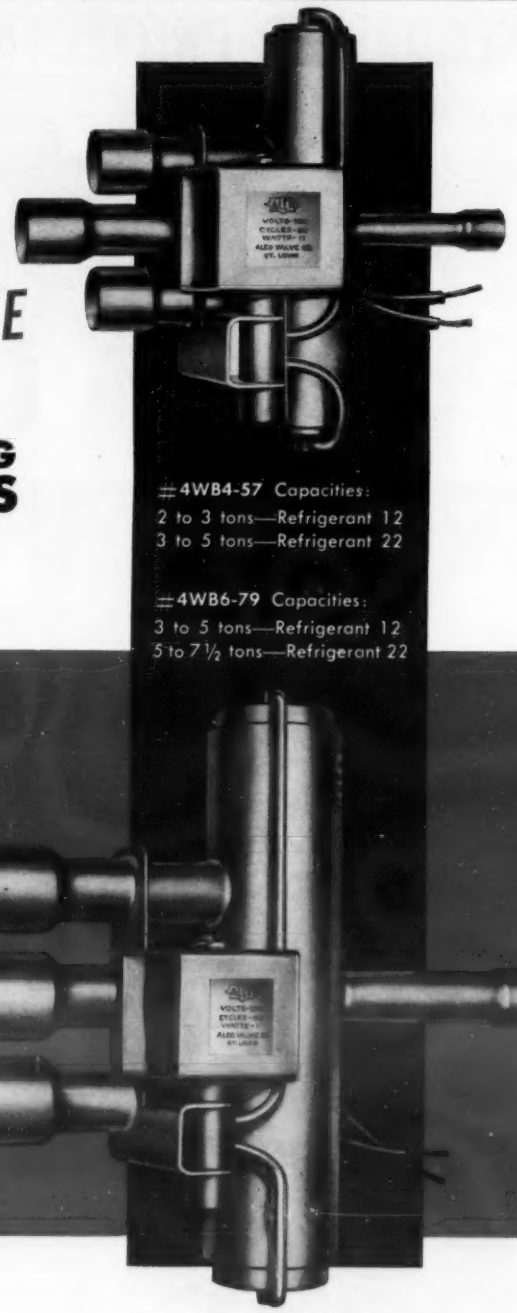
He added that since the advertisements appeared the complaints had "dropped off completely."

"We're still getting telephone calls from people who want advice about individual contractors," he said. "But apparently the ads did some good. The complaints have halted."

Barr expressed regret that he had to run the ads to begin with, but said, "things had gotten out of hand."

The proposed lawsuits were being planned, the contractors said, because the BBB message "slurred the whole industry rather than the few (contractors) who violate good trade principles."

Made by **ALCO**
OF CAST IRON AND STEEL
like a Compressor
for LONG RELIABLE LIFE



4-WAY REVERSING VALVES
for all reverse cycle systems

#4WB4-57 Capacities:
2 to 3 tons—Refrigerant 12
3 to 5 tons—Refrigerant 22

#4WB6-79 Capacities:
3 to 5 tons—Refrigerant 12
5 to 7½ tons—Refrigerant 22

Features:

- fine machining and precision honing of cast iron slide and steel outer shell—NO PLASTICS ARE USED.
- operating tests of 300,000 cycles without failure to shift and without loss of tight seating—tests made by independent laboratories.
- shifting (change cycle) while the system is in operation with a 300 PSI differential.
- rapid shifting—to shorten change-over time and therefore shorten defrost cycle.
- the shifting of the valve independent of any pressure drops, and efficient shifting under any combination of operating conditions.
- mounting in any position—except with the pilot valve upside down.

Call your Alco wholesaler—write for Specifications.

• BUY SECURITY
• BUY QUALITY
• BUY ALCO

ALCO VALVE CO.
653 KINGSLAND AVE. • ST. LOUIS 5, MO.

8223

The one complete line of refrigerant controls: Thermostatic Expansion Valves • Refrigerant Distributors Solenoid Valves • Suction Line Regulators • Flooded Evaporator Controls and Reversing Valves

Copeland Record--

(Continued from Page 1, Col. 4)

due to increased sales and additional operating efficiencies, the report said.

Copeland operations were augmented by manufacturing license agreements in England, France, Germany, and Spain. Gleason commented that "we are working with manufacturers in India, Italy, Brazil, Argentina, and Australia to established licensees there."

"Currently," he added, "totally-owned manufacturing facilities are being set up in Mexico and Canada which, when shortly in operation, will further improve Copeland's over-all sales volume."

Jamison--

(Continued from Page 1, Col. 5)

tween areas of unequal air temperatures.

Jamison will distribute the apparatus to users in the refrigeration industry and also other fields where temperature control is not a determining factor, according to J. V. Jamison, 3rd, president of Jamison Cold Storage Door.

The new apparatus provides an air barrier for warehouses, loading docks, controlled-humidity rooms, and areas with odor, dust, and vapor problems.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

NAPRE Sets Program for 51st Annual Meeting In St. Louis Nov. 28-Dec. 2

ST. LOUIS—Program for the 51st annual meeting of the National Association of Practical Refrigerating Engineers was released recently by J. Richard Kelahan, executive secretary.

The convention, which exhibits by industrial members, will be staged in the Sheraton-Jefferson hotel here from Nov. 28 through Dec. 2. Theme of the convention is "Integrity, Competency, Economy—A Continuing Maxim."

Tentative program follows:

MONDAY, NOV. 28

10 a.m.—Directors meeting, annual reports.

5:30 p.m.—Directors reception.

TUESDAY, NOV. 29

9 a.m.—Directors meetings, 1961 calendar planning.

WEDNESDAY, NOV. 30

8 a.m.—Plank Owners breakfast, certificate presentations.

9:30 a.m.—Opening general session, John N. Mariakis, president, presiding.

Welcome. Joseph Sestric, director of public safety, city of St. Louis.

Response. Leo J. Vivien, chief mechanical inspector, city of New Orleans.

Keynote address: "Refrigeration at the Crossroads—Today's Challenge to Engineers." William H. Aubrey, treasurer, Air-Conditioning & Refrigeration Institute.

11 a.m.—First business session. Introduction of officers, annual reports.

2 p.m.—First educational session.

Educational objectives, 1961. W. R. Woorich, educational director, NAPRE.

3 p.m.—Exhibit session.

7 p.m.—Visit to Falstaff Inn.

THURSDAY, DEC. 1

9 a.m.—Second general session, publications objectives, 1961.

10:25 a.m.—Second educational session.

"Controlling Liquid Behavior In Full-Flooded Evaporators." William H. Krack and Robert Niedermeier, Sporlan Valve Co.

"What's New In Air Handling Equipment." C. H. Cheyney, partner, C. H. Burnap Co.

"What's New In Air Filters." A. T. Miller, district manager, American Air Filter Co., Inc.

2 p.m.—Field trips. Anheuser-Busch, Inc. or Merchants Refrigerating Co.

6:30 p.m.—Cocktails, Statler-Hilton hotel.

7:30 p.m.—Dinner and dance, Statler-Hilton hotel.

FRIDAY, DEC. 2

9 a.m.—Third general session, business meeting, committee reports.

10.25 a.m.—Third educational session.

"Gas Powered Mechanical Refrigeration." Norbert K. Hall, manager, air conditioning and refrigeration division, Ready Power Co.

"How Staff Engineers Size Up Their Operating Engineer Counterparts." Speaker not announced.

2 p.m.—Fourth educational session.

"Apple Hydro-Cooling." Sherman E. Mapes, engineers, Lewis Refrigeration Co.

3 p.m.—Bureau of Refrigeration Information. Guy R. King, NAPRE assistant educational director.

How Can NAPRE Help the FFAICC?

What About Those NH_3 System Oil Problems?

Are Poor Piping Hookups Causing Your Parallel Condensing Problems?

4 p.m.—Fourth general session, business meeting and elections.

5:30 p.m.—Cocktails.

6:30 p.m.—Dinner.

7:30 p.m.—Officer installation.

8:15 p.m.—Entertainment aboard Golden Rod Showboat.

SATURDAY, DEC. 3

9 a.m.—Directors meeting, 1961 operations.

Supreme Court Cools Off Judge In Sweat over Air Conditioner

MADISON, Wis. — The Wisconsin supreme court has smoothed over the case of the unauthorized air conditioner that pitted an overheated judge against a recalcitrant county clerk during the dog days of early September. (See page 36, Sept. 19 issue of the NEWS).

The supreme court ordered Kenosha county judge Harold Bode to drop his contempt of court orders against County Clerk Richard Lindgren and Sheriff Floyd Hughes.

Lindgren aroused the judge's ire when he refused to pay for an air conditioner that the judge had ordered for his chamber without prior authorization by the county board.

When Lindgren refused to plead to the judge's charge of contempt of court, Judge Bode ordered Sheriff Hughes to jail Lindgren. After a Racine municipal judge freed Lindgren with a writ of habeus corpus, Judge Bode jailed the sheriff for honoring the writ.

At this point, the county's acting district attorney called upon the governor to intervene. As a result, the case was sent to the state supreme court for action.

The supreme court called the case a "tragedy of errors" and scored Judge Bode's "inept" proceedings. It conceded, however, that Judge Bode might have had grounds for a contempt charge if he had based it upon Lindgren's "insolent behavior" rather than his refusal to enter a plea.

Florida Dealers Top Room Cooler Quota

MIAMI, Fla. — The Florida Power & Light Co. reported that dealers in its territory sold 21,582 air conditioners in a four-month sales campaign to top their quota of 20,000 units.

In the "Enjoy Cool Comfort —Electrically" activity, Eastern Div. counties led the parade in percent of quota, with the Miami area second and Broward County third.

The campaign also included exhaust fans and portable fans. Exhaust fans reached 95% of quota and portables 96%.

Barnebey-Cheney Opens Office In N. Y.

COLUMBUS, Ohio — Barnebey-Cheney, manufacturer of activated charcoal and adsorption equipment, announced the opening of a new East Coast sales office at No. One Rockefeller Plaza, New York City.

Richard L. Grener, formerly sales engineer at Barnebey-Cheney, has been appointed New York manager.

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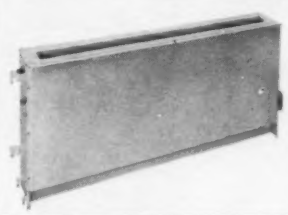
means COMFORT

in any language...

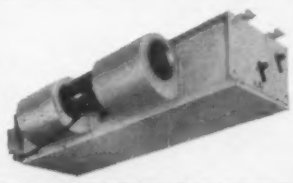
in any season!

MODEL B-D for vertical floor mounting "in-the-space" or semi-recessed up to 3½".



MODEL B-V for vertical concealed floor mounting.

MODEL B-C with finished cabinet for "in-the-space" horizontal mounting.



MODEL B-H for horizontal mounting in concealed locations (plenum optional).

COMPLETE FLEXIBILITY... 4 ROOM CONDITIONERS IN 5 SIZES EACH

Quietly, dependably, BOHN-AIRE Remote Individual Room Conditioners provide year 'round comfort in apartments, motels, hotels, offices, hospitals... in any building with a central hydronic heating and cooling system. They are extremely compact with a slim 8½" width... available in concealed models or in attractive, durable cabinet styles... easy to install and service. Finger-tip push button control! Many optional accessories.

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Buy the known line... the BOHN line

ALUMINUM & BRASS CORPORATION

Danville Division • Danville, Illinois

'Information Please'

Servicemen Get Answers from Experts at RSES Sessions

PORTLAND, Ore.—Three separate sessions of the popular "Information Please" feature were held at the 23rd International RSES convention in Portland.

Serving on the "Panel of Experts" were E. C. Hamilton, Worthington Corp.; A. E. Manning, Kelmore Mfg. Co.; Glenn Detrick, Copeland Refrigeration Corp.; Bryant Britt, Wagner Electric Corp.; Arthur Dietz, self-employed; Joseph P. G. Davis, Kinney Mfg. Co.; Dr. Walter O. Walker, University of Miami, and consultant to General Chemical Div., Allied Chemical Corp.; A. J. Arnold, Friedrich Refrigerators, Inc.; Dr. Ralph Downing, "Freon" Products Div., du Pont; Kenneth S. Franklin, Hussmann Refrigerator Co.; W. H. Larson, R. E. Chase & Co.; Alan R. McGarvey, Carrier Corp.

V-Belt Jumps

What causes a V-belt to jump off a V-grooved pulley? It has been determined it jumps off at the time the motor starts. Rope type drive belts work better but are quite expensive and come in a limited number of sizes.

It is due to stretching of the belts. This situation may be improved by using a smaller cross section belt to ride deeper in the grooves. In extreme cases, a heavy-duty belt is the only answer. Make sure pulleys are in line, and belts are tight. In some applications a low starting torque motor should be used. Dressing the belt with glycerine, and the use of a rocker arm with an idler pulley were also suggested.

Compressor Runs, Hums, Clicks Off

I have replaced three compressors on the same household refrigerator. Each has had the same problem. It would run for a time, then would begin to hum, and click off. Current draw was normal while running. Before replacing each compressor, the system was back flushed and blown out, and the refrigerant charge carefully measured. An over sized drier was installed in the liquid line. What causes a situation like this?

Be sure to remove the strainer ahead of the capillary tube during back flushing. Better yet, replace the entire capillary tube assembly. Varnish like substances, which cannot be removed, may build up inside the cap tube. The drier may be too large, acting as a receiver and placing liquid at the entrance of the capillary tube. There should be vapor entering the cap tube as well as liquid.

Why can a unit which fails to operate after a time often be fixed by using a starting capacitor, when the unit didn't require one to begin with?

The problem is probably in the capillary tube's being partially restricted. Also any resistance in the electrical circuit or low voltage may cause trouble. Adding the capacitor may appear to help, but does not find the real cause of the trouble.

If a compressor has to be "run in," why not have rings on the pistons? Wouldn't it be easier?

Normally, compressors, especially smaller ones, do not require running in. Lack of rings results in longer life, better fit.

What is a cold trap installed between the vacuum pump and the system being evacuated?

It is a chamber which is part of the manifolding between the pump and the system. It consists of a "cold finger" which contains a slurry of acetone and dry ice. It freezes out the moisture in the gases being removed, thus preventing the moisture from contaminating the oil in the pump.

Are there substitute oils for vacuum pump oils, and if so, what are the specifications?

Use a turbine grade oil, with no additives, of 300 SSU viscosity. Refrigeration type oils are quite satisfactory. The high viscosity is necessary since the oil creates the seal within the pump.

In evacuating a four-stage cascade system, the vacuum gauge indicated 50 microns while the vacuum pump was running during evacuation. On the block-off test, however the pressure rose to 575 microns. Is this a satisfactory vacuum?

When this happens, it is usually an indication that some liquid, such as water is in the system, and the pressure rises to equal its vapor pressure at its particular temperature. The pressure of 575 is too high to be satisfactory, especially for ultra low temperature equipment.

How can you tell when the oil in a vacuum pump needs to be changed?

Appearance of oil is a good indication. Moisture emulsifies it giving a milky appearance. The pumping efficiency of the pump is affected, and will also be an indication.

What is activated charcoal, and can it be used in household refrigerators for odor removal?

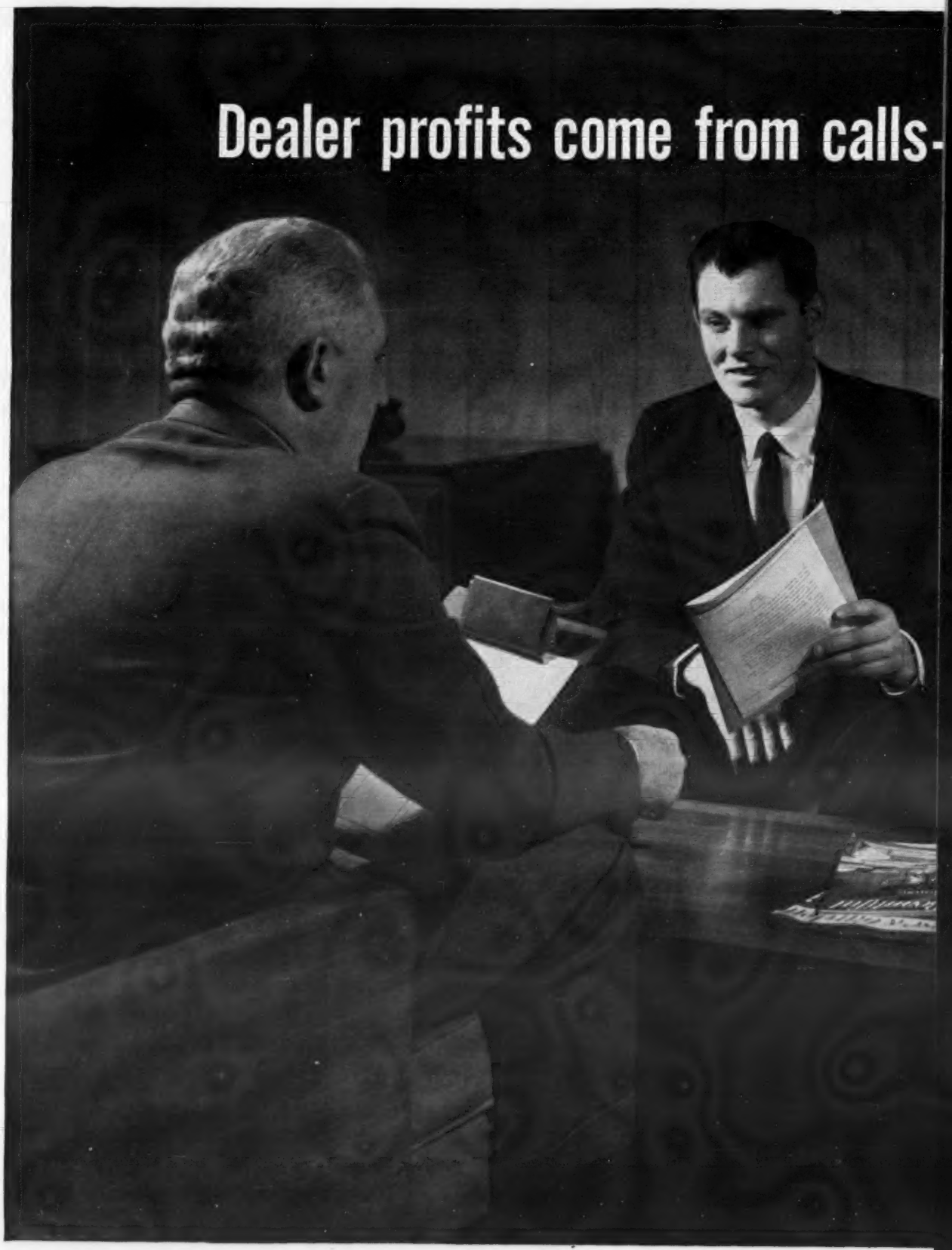
Activated charcoal is made by heating charcoal in an inert atmosphere. This forms a sponge like substance which readily adsorbs odors. Although it is usually made from cocoanut shell charcoal, other types are used. There are several forms on the market for use in domestic refrigerators. They are inexpensive and relatively effective.

Using the epoxy resin weld in the refrigeration system is new. Is it the only answer to repairing aluminum evaporators? Is it available?

There are several good aluminum solders. The big problem in aluminum soldering is temperature control, as well as cleanliness. Epoxy resins are readily available. The tubing must be very clean, resin is mixed and applied after swedging out the joint. It must either be cured for about 10 hours at over 70° or in 3 to 5 minutes at 225°. Patches may also be made in this manner.

What is a slave coil, and how does it operate?

Slave coils have been used extensively in domestic refrigerators, for a number of years. It



is a secondary refrigeration system using a separate refrigerant and is completely sealed. It exchanges its heat with the low side of the primary system. Its purpose is to provide a medium temperature area operating off a low temperature system.

What oil can be used on a two-stage system in which temperatures of -90° are attained? Will an extremely low floc point oil affect the operation of the high-pressure stage?

The floc point is established at the concentration of 10% oil in the refrigerant. At this concentration, an oil with a floc point of lower than -90° will have to be used. Otherwise the system will not be able to operate, as wax will separate out. The extremely low floc point oil may result in poor lubrication of the high-stage compressor.

Since the only purpose of the oil is to lubricate the compressor, the best solution is to keep it out of the rest of the system by use of an oil separator. As the concentration of oil decreases, the floc point of the solution lowers. The tendency is growing toward the selection of oil for its lubrication properties, not for its flow at lower temperatures.

Memphis Silver Shield Leaders

SOME of the key members of the Memphis Indoor Comfort Bureau are pictured here. They are: (l. to r.) William J. Jason, chairman of the inspection committee; John P. Walker, chairman of membership committee; George M. Slager, treasurer of the Indoor Comfort Bureau; Grover L. Walker, chairman of the promotion committee; and R. B. Buckingham, president of the bureau. They were photographed in attendance at the launching of the Silver Shield program at the Imperial Restaurant here last month. In attendance to witness the licensing of the new group by James M. Martin, managing director of the National Warm Air Heating & Air Conditioning Association, were some 100 individuals.

Consulting Engineers Council Reports Rapid Growth In Use of New Insignia

CONSULTING Engineers Council insignia, displayed here, was adopted at the organization's last annual meeting.

PORTLAND, Ore.—The new insignia of the Consulting Engineers Council is reported being used more and more.

This follows the council's adoption of the official insignia at its annual meeting in Gearheart, Ore. last May. Now for the first time, CEC has a recognized national insignia.

The three-pointed star emblem is designed for use on all CEC material such as association and business stationery, publications, meeting banners, and telephone listings, according to J. Donald Kroeker of Portland, chairman of CEC's public relations committee. Its use on drawings or specifications is prohibited, however.

Easily reproducible and distinctive, the insignia came into being as part of a national competition in 1957. W. O. Stevens, of W. O. Stevens & Co., Mercer Island, Wash., then past president of the Consulting Engineers Association of Washington, was the insignia designer.

Stevens pointed out that the insignia design was not intended as a trade mark, "but rather as an index of performance or professional integrity."

He said the points of the star "are symbolic of the directions council members are required to follow. One point represents performance standards. All services rendered by members of the council must be complete, accurate, and in accordance with current best practice.

"The second point in the star is intended to represent the ethical principles established by the council, to which all members must adhere.

"The third point in the star is intended to direct members along channels which do not permit the sale of services and materials or equipment of a conflicting nature, which is in accordance with the definition of a consulting engineer adopted by the council. This states that a consulting engineer must not be engaged in conflicting services."

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It's surprising what heating and air conditioning manufacturers can learn when they're willing to roll up their sleeves and work side by side with the most important man in the business: you, the dealer.
Close Lennox cooperation in the field resulted in the finest sales and service schools in the industry. This policy enables *your salesmen* to share experiences . . . improve their selling techniques . . . learn to close more sales, faster. And your installers become more expert in making installations right the *first* time (without profit bleeding follow-up calls and make-over work).
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Jordan Supply Co.'s Educational Exhibit Set for Dec. 2-3

BUFFALO — A trade show and educational exhibit will be held Dec. 2 and 3 on the premises of Jordan Supply Co., wholesaler of air conditioning, heating, and refrigeration supplies in the Buffalo area.

Representatives of some 20 or more manufacturers of such equipment will be on hand to describe the functioning of their product or to illustrate some air conditioning or refrigeration principle through demonstrations, reports Thomas F. Jordan, who heads up Jordan Supply Co. Special efforts will be directed towards getting attendance from mechanics in the heating and plumbing trades.

Show hours will be 1 to 5 p.m. and 7 to 10 p.m. each day. The event will also commemorate the 15th anniversary of Jordan Supply, founded Dec. 1, 1945.

Plastic Film Used as Vapor Barrier on Ducts

SEAMLESS TUBE of Durethene film is slipped over padded air conditioning duct.

PITTSBURGH — Use of "Durethene" polyethylene film as a vapor barrier on air conditioning ducts has proved both satisfactory and advantageous for the Smith-Kelly Supply Co. of Mobile, Ala., according to Sam B. Douglas, manager of that company's heating and air conditioning department.

The film is a product of the Plastics Div., Koppers Co., Inc. here.

Smith-Kelly, said to be one of Mobile's largest builders supply firms, is now using this film as a vapor barrier on all the air conditioning ducts they install, which consist mainly of residential home units with a few of the small commercial variety, it was stated.

Using a 1,500-ft roll of tubular Durethene film, the installer gradually works the tube onto the air conditioning ducts until they are completey covered with plastic.

Since the tubed film is seamless, which eliminates the need for taping, the cover is continuous from coil to outlet.

With the use of Durethene film as a vapor barrier, condensation is no longer a problem, Douglas pointed out. The condensation would form on the air conditioning duct as a result of cold air passing on the inside while warmer air flowed on the outside.

In addition, the cost of Durethene film is considerably less than the material used previously for this purpose, is easier to install, and is non-flammable, according to the Koppers division.

From the Manufacturers

Service Bulletins

In this department, the NEWS presents significant items from information published in the Service and Technical bulletins of manufacturers.

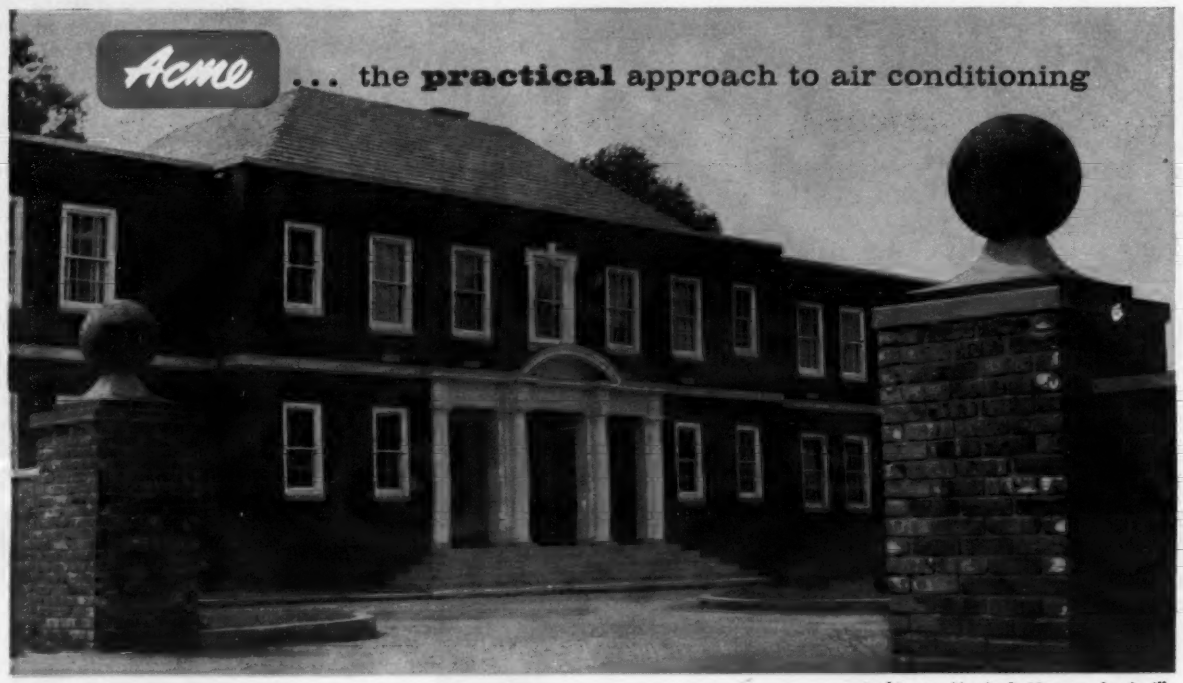
It has been found in some instances that installers of packaged condensing units are removing the evaporator fan relay from the condensing unit and mounting it on the furnace. This practice is not approved by Airtemp.

1. Such an alteration of the unit's control panel violates Underwriters' Laboratory approval.

2. If the relay is not properly enclosed when it is installed on the furnace, it can present a serious hazard.

Therefore, the evaporator fan relay must not be moved from its location on the control panel, and the inter-wiring of the condensing unit and the furnace must be made up as outlined in the installation instructions. We would also suggest that any installation already made with the relay mounted on the furnace be given careful consideration to correct any possible hazards or violations of applicable electric codes.

AIRTEMP DIV.



Architects, Nevin & Morgan, Louisville

Acme... saves on installation
... cuts down on running costs

Resounding is the only word for the chorus of "ayes" in favor of the Acme air conditioning system now comfort cooling the Carver School of Missions & Social Work at the Southern Baptist Theological Seminary, Louisville, Kentucky.

Roy B. Sanders, mechanical contractor, is an old "Acme hand", having installed Acme units in the Kentucky State Police Barracks and Municipal Building, Frankfort General Hospital, Louisville, in addition to this job. And according to Roy "Acme is outstanding because it comes in smaller packages than any other equipment of comparable efficiency . . . it's simple to handle, simple to install. In fact, counting materials and man hours, Acme saves me about 10% on installation."

E. R. Ronald, consulting engineer, states "Acme equipment easily fits the architectural specifications we have to follow and we consider it the equal of any more publicized unit in the country."

And the end consumer? Michael L. Speer, Director of Administration for the School says "*Acme couldn't be surpassed for a private institution* such as Carver School. It supplies a maximum of comfort with a minimum of operation. It cuts down on running costs."

Why not join the ranks? There's an Acme sales engineer near you who'll be happy to "sign you up".

Acme INDUSTRIES, INC.
JACKSON, MICHIGAN • GREENVILLE, ALABAMA
MANUFACTURERS OF QUALITY AIR CONDITIONING AND REFRIGERATION EQUIPMENT SINCE 1919

Packaged Chillers 1½-250 tons
Remote Room Conditioners 200-600 cfm
Cooling Towers 3-120 tons
Packaged Air Conditioners 3-60 tons
Evaporative Condensers 10-110 tons
Air Handlers 665-47,000 cfm

Lehleitner Named to Jackes-Evans Post

ST. LOUIS—Robert S. Lehleitner has been appointed sales manager of the Controls Div. of Jackes - Evans Mfg. Co. here, according to John H. Marling, vice president.

R. Lehleitner

Lehleitner has been field sales engineer for this division of Jackes - Evans for the past two years. He brings to his new appointment specialized training and experience in all aspects of solenoid valve flow control for refrigeration, air conditioning, industrial equipment.

Malls To Be Included In Shopping Center Air Conditioning

NEW YORK CITY—Designed for all-weather shopping, the malls of a proposed 66-acre regional shopping center in Fairfield County, Conn., will be enclosed and completely air conditioned, it was reported.

Construction is scheduled to get under way next spring on the first phase of the Trumbull Shopping Park.

According to the report, the Park eventually will comprise 1,000,000 sq ft of buildings and will be one of the largest such centers in the world under one roof. Among unusual planned features will be 1,000 ft of garden malls with fountains, trees, flowers, and birds.

The architect is Anthony M. Pavia.

Hugh T. Williams Heads Insulation Manufacturers

NEW YORK CITY—Hugh T. Williams, manager of engineering and industrial sales, Owens-Corning Fiberglas Corp., New York City, has been elected president of the National Insulation Manufacturers Assn.

The new vice president of NIMA is Emil T. Johnson, vice president of Union Asbestos & Rubber Co., Bloomington, Ill. Ike Keith, president of Forty-Eight Insulations Inc., Aurora, Ill., is the new treasurer.

New Officers and a 3-to-90-Ton Line of Heat Pumps Announced by Tempromatic

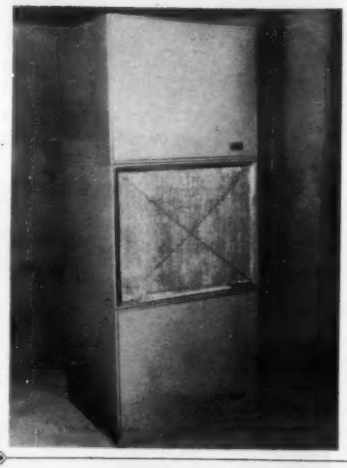
DE LAND, Fla.—New officers and a complete line of heat pumps ranging from three to 90 tons capacity were announced recently by Tempromatic Corp. here.

Tempromatic's board of directors has elected Robert C. Dukes as president to succeed A. W. Griffith.

Other officers elected are: Virgil W. Tipton, executive vice president; Charles E. Lowe, vice president; Barbara C. Paulling, secretary and assistant treasurer; and Charles B. Lowe, treasurer.

Tempromatic's heat pumps include air-source remote units to 30 tons, water-to-air units for both remote and packaged applications to 30 tons, and water-to-water units and chillers to 90 tons.

The air source "Auto-Temp" unit features sight glass moisture indicator, insulated drain pans, dual outdoor coils, heavy duty compressors, filter driers in both liquid lines, and crankcase heaters.



TEMPROMATIC remote water-to-air heat pump.

Both indoor and outdoor units are constructed of heavy zinc-coated steel with a baked-on enamel finish.

The fan-coil section can be arranged for six different airflow arrangements in the field. Both indoor and outdoor units use squirrel-cage fins for high static as well as quiet operation.

The compressor, changeover valve, receiver, and other parts are separated by a bulkhead from the fan-coil section of the outdoor unit. This feature allows the unit to be serviced without affecting the air flow across the outdoor coils.

The coils are oversized to increase capacity and the refrigerant is controlled by heat pump expansion valves for better control over the wide variation of outdoor temperatures encountered in heat pump operation. The units also incorporate a non-overloading feature for mild weather operation.

The new WAR series of water-to-air units are being produced in the 3, 4, and 5-hp sizes providing 3¾-ton to 6-ton capacity.

The units are flexible in that they can be used as a package, remote condensing unit application, or horizontal package. Fan-coil section can be arranged for six different blower discharges. Any of these arrangements can be made in the field or supplied from the factory.

Packaged water-to-air heat pumps are available in "closet" models of 3, 4, and 5 hp and in pre-wired models of 8 and 10-ton capacities.

They utilize a chiller-condenser incorporating a highly efficient jet for metering refrigerant on the heating cycle, providing an extremely efficient heat transfer and positive oil return to the compressor.

Pressure drop across the jet nozzle is used to provide a secondary spray of liquid refrigerant over the water coils, thereby increasing efficiency of operation, the company claims.

Additional features include oil separator and permanent high-velocity filters.

88% Auto Cooling Sales Rise Aids Warner Volume

BELOIT, Wis.—An 88% sales increase in the booming automotive air conditioning industry enabled Warner Electric Brake & Clutch Co. to post sales of $8,656,001 for the nine months ended Sept. 30, according to Steven P. J. Wood, president.

The figure compares with sales of $8,960,365 for the same period in 1959, Wood said. Net earnings were $464,849, compared with earnings of $568,108 during the comparable period last year.

Wood, in his first interim report to stockholders since the company became publicly held in August, noted that sales to the capital goods industry held about level with 1959 in the face of a general decline in the industry. Warner Electric's brakes and clutches are used in automating capital goods ranging from machine tools to missile launchers.

The company experienced a sharp drop in wheel brake sales to the depressed mobile home industry, but countered that decline by expanding its already large share of the automotive air conditioning market by 88%, Wood said.

"Consequently," Wood noted, "we held our total sales to within 4% of last year."

Warner Electric produces compressor clutches for automotive air conditioners, a growth industry whose sales have multiplied by 1,450% in the past decade, it was stated.

Wood said earnings failed to keep pace with sales "due to severe price competition in the mobile home market and to substantial non-recurring expenditures incident to the introduction of several new product designs."

Warner Electric has about 1,100 stockholders in 33 states. The company stock is traded over-the-counter.

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Features
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- Immaculately Clean Inside Surface, thanks to Most Modern Production and Exhaustive Inspection.
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- Uniform Softness for Easy and Inexpensive Binding.

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Specify READING "LEKTRONEAL"®
For COMMERCIAL COPPER TUBE (in Varied Shapes)
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Specify READING
For SMALL, SEAMLESS PRECISION COPPER TUBE
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CHICAGO, ILL., 305 W. 31st St.
CLEVELAND, OHIO, 1562 E. 55th St.
NEW ORLEANS, LA., 1102 St. Thomas St.
DENVER, COLO., 2635 Walnut St.
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COMPLETELY INTEGRATED QUALITY CONTROL, FROM OUR OWN REFINERY TO OUR OWN DISTRIBUTION DEPOTS

Outside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

(Continued from Page 1)

of parts don't arrive on time. It's a mess, by our standards.

But Shannon struggles through, somehow, thanks to sheer ingenuity and perserverance.

His wife, Lavinia, teaches ballet in Haiti—and voodoo dancing patterns in New York City.

Together, they're remarkably successful representatives of that valiant little band of Americans-working-abroad expatriates. They are ambassadors of "our way of life."

Shannon and Lavinia know "everybody" (in all walks of life) in this early-independent Negro Republic. Happily, they introduced "Dope" to its movers-and-shakers.

Interviews with the latter revealed the following promissory facts about Haiti.

Welcome, Yankees!

Republic of Haiti, like Puerto Rico (and unlike Cuba) is stimulating American business enterprises through favorable tax rates.

This situation should be particularly interesting to us, because the United States Treasury recently has announced that taxes paid in Haiti may be deducted when computing our own Federal income taxes.

To encourage the establishment of new industries, additional generous tax concessions are offered. Every enterprise newly organized in Haiti enjoys for a period of five years:

(1) Reduction of income taxes and license fees in the amount of 50 percent.

(2) Exemption from export duties, and

(3) Customs immunity on the importation of machines and apparatus necessary for doing business.

Profits are convertible directly into United States dollars, which circulate freely in Haiti.

No controls are exercised over transfers of royalties, earnings, capital and dividend declarations. No special regulations or restrictions exist as to imports.

The United States Treasury Dept. holds that, to the extent American taxpayers pay income and similar taxes under these laws, they are entitled to credit for such payments against United States income taxes.

U.S.A. entrepeneurs are entitled to this tax credit on their Haitian operations whether the actual business vehicle is a branch; a proprietorship; a partnership; a domestic or Haitian subsidiary corporation; or a totally independent corporation.

U. S. A. citizens who live in Haiti 17 out of 18 months—whether or not it is their intention to reside there permanently—are not subject to United States income taxes on the first $20,000 of their annual personal earnings.

Such United States citizens can qualify for exemption on *all* of their personal earnings if they can prove that they are *bona fide* permanent residents (except for occasional visits to the States).

Proudly Independent

The Republic of Haiti is one of the only three independent nations in the West Indies.

The other two are Cuba (whose "independence" now is questionable) and the Dominican Republic, which shares the eastern half of Haiti's island.

Other islands in the Caribbean either are colonies or dependencies of Great Britain, the Netherlands, and the United States.

Haiti is the smallest and most densely populated of all Western Hemisphere republics. In area, it is about the size of Maryland. Also, it's the only all Negro government in all the Americas.

Chris Columbus landed here in 1492, during a storm. Haiti has had a stormy history ever since, under successive Spanish and French rule, and even during independence.

Toussaint L'Ouverture, a Negro general of fantastic capabilities, led a successful revolt against the French in 1801.

Twenty years later Haiti became a republic. At that time the Republic of Haiti embraced the whole of the island on which it is located. In 1843, when the eastern two thirds revolted, the Dominican Republic was established.

Followed then a period of revolution, corruption, and disease, which was terminated in 1915 when the United States Marines took command. By treaty the U.S.A. agreed to help administer this country until Haitians could govern themselves.

Our Marines departed in 1934, but United States financial experts continued to supervise Haitian fiscal activities until 1941, when they were superseded by the republic's own Banque Nationale d'Haiti.

Grim Facts-of-Life

The Republic of Haiti occupies some 10,714 square miles. Its population is estimated at about 3,112,000, of which 90 percent are (unfortunately) illiterate. In residence are some 3,000 whites, and the rest are mulattoes.

Principal city and seaport is its capital, Port-au-Prince, which has a floating population of about 250,000.

An easily recognized "Haitian elite" constitutes the dominant class politically and socially. They speak French and English, and are Roman Catholics. Many have been educated abroad.

The "unwashed" speak a Creole *patois,* and some still advocate voodoo rites. They'll hex you if you don't watch your manners. No kidding!

DECORATIVE ARCH (above) bestrides a Port au Prince avenue. Most streets aren't nearly so modern.

Candid Corner

SHANNON YARBOROUGH, combination contractor-wholesaler-serviceman in Haiti, stands outside his Port au Prince headquarters. He provides 24-hour service on any type of refrigeration and air conditioning equipment.

IN HAITI, the lucky ones ride donkeys to work. Most people have to walk.

EVEN THE KIDS get into the act. Half the population seems to be engaged in selling gimmicks to tourists.

More Pleasant Facts

The Haitian Department of National Economy believes that the following industries could prosper in Haiti because of an abundance of low-cost raw materials:

Leather, glass, salt, preserves, butter, cheese, paper, fish, textiles, bauxite, manganese, copper, lignite, soap, pharmaceuticals, plastics, limestone, cement, bricks, straw, rope, cooking oil, wine, and beer.

Got a buck to spare? Invest in Haiti! Wanna know how? Or know who? Meet Shannon Yarborough!

Haitian exports, in order of importance, include coffee, sisal, sugar, cotton, castor beans, essential oils.

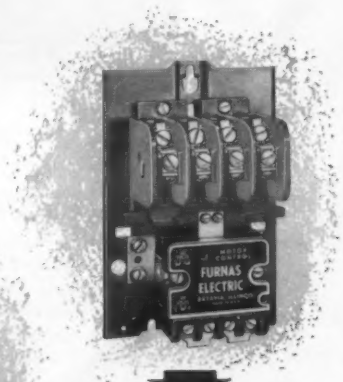
SPECIFY

FURNAS CONTACTORS FOR AIR CONDITIONING, REFRIGERATION and HEATING

Choose from the wide variety of Furnas Electric contactors to satisfy your motor and resistance heating applications. These heavy-duty controls feature compact construction and reliable, trouble-free operation.

This 2 and 3 pole contactor is rated to 25 amperes full load, to 150 amperes locked rotor for hermetic motors, to 3 hp 550 volts for general purpose motors, and to 25 amperes for resistance heating applications.

Current rated contactors for controlling compressors available through 600 amperes. 20, 30, 40, ampere, 2, 3 and 4 pole devices, all with interchangeable mounting dimensions. Mount in any position. For use in Open and Type 1 enclosures.



Special purpose contactors for resistance heating applications are rated through 195 amperes. 2, 3 or 4 pole. Available in General Purpose Type 1 enclosures, or as Open Type for panel mounting.

Write today for complete information and prices—
1111 McKee Street, Batavia, Illinois.

A90

FURNAS ELECTRIC COMPANY

BATAVIA, ILLINOIS

SALES REPRESENTATIVES IN ALL PRINCIPAL CITIES

EEI Kicks Off House Heating Drive With Ad In Nov. 21 Life Magazine

NEW YORK CITY — Edison Electric Institute will kick off a new campaign for electric house heating in the Nov. 21 issue of *Life* magazine, with 63 insertions between now and the end of 1961.

Ads will run in *Life, Saturday Evening Post, Reader's Digest,* and *Better Homes & Gardens,* plus *House & Home, Practical Builder, NAHB Journal of Homebuildings,* and *American Builder.*

W. M. Shepherd, vice president of Arkansas Power & Light Co., who is chairman of EEI's Live Better Electrically Policy Committee, said the creative approach is based on the cleanliness of electric house heating.

Body copy includes quotes from housewives who are living in electrically heated homes, testifying on the cleanliness point. At the bottom of the ads, thumbnail sketches and descriptive copy show the five different kinds of equipment used to heat a home electrically.

In the trade books, testimonials from builders disclose specific advantages for the builders in reducing building costs, selling houses faster, lowering selling prices, and increasing customer satisfaction, it was stated.

Shepherd said about half the ads will be on heating exclusively, while the others will feature heating as the central idea in total electric living.

The heating campaign will cost slightly more than $1,000,000, Shepherd disclosed.

"Electric house heating is the heart of our campaign to promote the total electric living concept," Shepherd said. "About 850,000 U.S. homes are now heated electrically. The enthusiasm of people who live in these homes astounds even the people in the industry.

"There is evidence," he asserted, "that house heating may rapidly become the most important development in our industry since the electric range."

He said that, in the last year, the number of U.S. homes heated electrically jumped about 40%. Estimates of electrically-heated homes by 1970 run from 4,000,000 to 6,000,000.

The Live Better Electrically Program, with a budget of $2,800,000 for 1961, is supported by 150 U.S. utilities.

Controlled Outside Air Supply Ends Fireplace Woes with Electric Heat

MARSHALLTOWN, Iowa — Provision of an outside air supply with an automatic or manual damper will solve the problem of operating a fireplace in a tightly sealed electrically heated home, according to engineers of Lennox Industries, Inc.

Gist of the problem, they point out, is that natural air infiltration is virtually eliminated in the heavily insulated, double-glazed, and weather-stripped home with non-ducted electric heating. This means that in such homes there isn't sufficient air to support combustion of a fireplace fire.

In their experiments, the Lennox engineers found that it was invariably necessary to open a door or window to get satisfactory fireplace operation. This upset thermostat control and created uncomfortable drafts on the house occupants.

Continuing their experiments with several different Lennox forced air electric furnaces supplying the necessary heat, they found that a manually or automatically controlled outside air supply to the return air side of the furnace solved the fireplace operation immediately. They found that it was easy to arrive at a damper setting which furnished the exact right amount of air needed to replenish the air consumed by the fireplace. No open door or window was necessary.

They advanced the opinion that it would be possible to link the fireplace damper control to the damper controlling the fresh air supply to the furnace so that whenever fireplace operation was desired, the proper quantity of combustion air would be provided whenever the fireplace damper was open.

These experiments also afforded opportunity to observe comfort benefits noted in previous tests. Their reports made frequent reference to a "feeling of air freshness." Tobacco and cooking odors, they said, were quickly dissipated. Also, with the controlled addition of outside air and by continuously circulating all of the air in the house through the furnace, maximum filtering and humidity control were achieved, according to Lennox.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

OHI Sponsors Study Of Smoke Emissions At Michigan State

NEW YORK CITY—An Oil Heat Institute of America sponsored research project concerned with the smoke emission factors from oil heating equipment is now under way at Michigan State university, it was announced by Charles H. Burkhardt, OHI managing director.

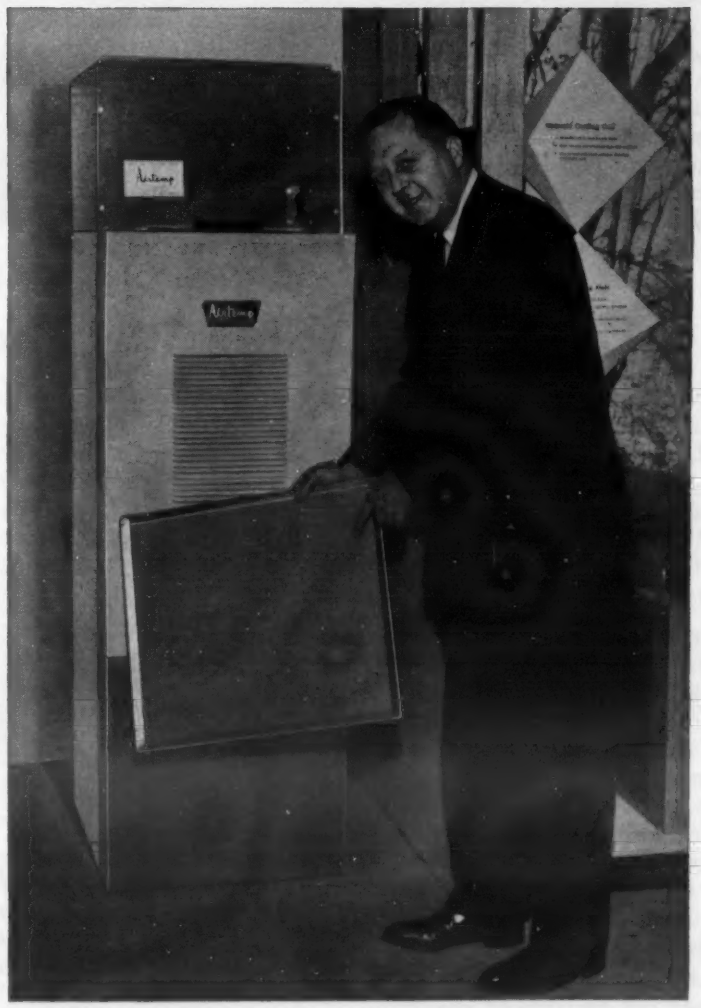
This research project is under the direction of Charles Pesterfield, professor of mechanical engineering at the university and technical secretary of the Commercial - Industrial Section of OHI's Manufacturer Div. He is also chairman of the Oil Burner Committee of the Air Pollution Control Association, a national group which devotes itself to this subject.

Pesterfield said the Michigan State project will make a complete study of smoke emission and the chemical composition of such smoke arising from the operation of oil burners.

"The lack of specific and exact data on this subject has seriously handicapped the oil heating industry in the past in the presentation of cases before public bodies in defense of general and specific use of oil burning equipment, and it is felt the findings of this research project will be of tremendous value," the announcement stated.

"With ScottFoam filters, air flows more freely in our new line of high-velocity air furnaces"

says
Mr. William L. Regan, Packaged Products Sales Manager, Airtemp Division, Chrysler Corporation, Dayton, Ohio



"The unit blowers in our new 4200-03 Series furnaces have to be larger because the furnaces are designed primarily for air conditioning applications. We accomplish the higher airflow needed by using ScottFoam filters with our larger blower sizes.

"Our plant employees also like ScottFoam filters. They're easy to handle. And safe. There are no spun glass slivers to bite into a worker's hands — or cause harmful skin irritations.

"And here's a customer benefit. ScottFoam filters are the permanent type. They can be washed when they become dirty, eliminating the need for replacing, as with commonly-used throw-away filters."

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another product of research by
Scott Paper Company

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Consider the use of ScottFoam filters in your air-handling equipment. To get the complete story, write for this new booklet — *ScottFoam Filter Media.* Use the handy coupon.

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Scott Paper Company, 15831 W. 7 Mile Road
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They'll Do It Every Time

by

Jimmy Hatlo

HEY, MR. BIGDOME! YOU HIT THE POOL! $500! AND THIS IS THE FIRST WEEK YOU'VE BEEN IN IT···
$500!! WELL, WHATTAYA KNOW! YAS!! I CAN USE THAT··UH··AND YOU CAN CANCEL MY NUMBER FROM NOW ON··· I DON'T EXPECT LIGHTNING TO STRIKE TWICE····
THE @☆!!#! WOULD WIN! I'VE BEEN PLAYING THAT POOL 20 YEARS AND NEVER EVEN GOT A FREE RIDE!!
THE WINNER ALWAYS GIVES DUTCH A TIP··BOSS-O WOULDN'T GIVE YOU THE TIME IF HE HAD A POCKETFUL OF WATCHES···
QUITTING THE GAME WHEN HE'S AHEAD! HEY! HAS DUTCH GOT A GOON SQUAD
THIS IS PAYOLA··· IF HE DIDN'T WIN··"NO GAMBLING OF ANY KIND ALLOWED"!
"THEM AS HAS, GETS"·· AND DON'T FORGET TO TELL UNCLE SAM···· THANX AND A TIP OF THE HATLO HAT TO GEO. HATTAUER, STROUDSBURG, PENNA.
9-9
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Are ARI and ASHRAE Duplicating Effort on Standards?

NOT NECESSARILY; it just seems that way.

Those who complain that Air-Conditioning & Refrigeration Institute is becoming "just another engineering society" because of its standards activities are probably missing a fundamental point.

Basically, it is the function of an engineering society to create *testing* standards; manufacturers' associations, ARI in this case, are responsible for developing *rating* standards. The former tell how to test; the latter indicate how to use such tests to judge performance of equipment and components.

Usually, the testing standard developed by the engineering group is used as a base for the association's rating standard.

Some confusion in the heating-cooling industry is due to the unfortunate labeling of old ASRE standards as "rating and testing" standards. This is being corrected.

To avoid duplication of effort and working at cross purposes, ASHRAE and ARI now maintain active coordination between their respective standards committees, with several key members serving on both.

Whatever confusion exists about present standards will clear up as these two groups, one an engineering society and the other a manufacturers' association, work at their business while maintaining close liaison with each other.

I'm Stupid: Let Me Stay That Way

RECENTLY, a manufacturer of gas air conditioning was giving a week-long course to the service employes of a large gas utility. As is customary with the instructor, he assigned homework to the employe-students so they might derive greatest benefit for the five-day exposure to gas air conditioning.

But he ran into trouble.

The servicemen are union employes; confronted with the prospect of doing homework, they asked, "How much overtime pay will we get?" The union steward approached the company and was told that, since the company was training the men on its own time, they should cooperate by doing a few hours homework on their own. "You stand to benefit certainly as much as individuals," the company felt, "as we do as a company by getting maximum benefit from the course."

At the end of the day, the instructor passed out assignment sheets.

The next morning the sheets were turned in. A few had a man's name on them; most had no identification. Not one man in the class had performed the homework.

Devoted free enterprisers will chant, "See how the union movement has destroyed incentive; look at the obsequiousness of formerly independent men; observe the mediocrity and servility of the organized working man."

But hold. Here is another example.

One of the largest manufacturers of low temperature refrigeration systems and environmental equipment makes it a point, whenever possible, to train the contractor of a customer's choice on the maintenance and service of its specialized equipment. The company will train such personnel either on the job site during installation and start-up or at its factory at the contractor's convenience.

(While using familiar components, such as compressors, coils, expansion valves, and controls, low temperature systems are much more complex, more sophisticated than normal refrigeration cycles. Without added training, most commercial refrigeration and air conditioning servicemen are not qualified to work with low temperature equipment. See Tech Centers of Oct. 3, 10, 17, 1960.)

"We are dismayed," reports this manufacturer, "by the number of contractors who refuse either to partake of the training or to send their men."

"If your buyer isn't willing to pay for having my men take the training, I can't see why I should foot the bill," is the usual response. "My own time is too valuable to donate."

DONATE?

How shortsighted is the attitude which fails to recognize the advantages of increasing the knowledge and skill of oneself and one's employes?

Indeed we have here examples of both labor and management saying, in effect, "I'm stupid; let me stay that way."

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AIR CONDITIONING HEATING & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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From the Files of the News

25 years ago . . .

Standards methods for rating and testing air conditioners, as formulated and sponsored by leading technical and trade associations, were published by the NEWS. Included were: items required for rating, a standard basis for rating, information on volatile and non-volatile refrigerants, and types of instruments needed. . . . A hearing date was set on the proposed refrigeration code of the City of New York which would place some drastic restrictions on installers of refrigerating and air conditioning systems.

In a move to strengthen its representation, the recently formed National Refrigeration Supply Jobbers Association is asking the cooperation of parts manufacturers in obtaining names of reputable wholesalers handling their products who might be interested in joining the new national organization. . . .

"Toxicity of Gases, Including Refrigerants" text of an address by H. V. Higley, Ansul Chemical Co., before the second annual RSES convention, was published in the NEWS.

Donahue's cafeteria-restaurant in Pittsburgh now boasts one of the largest and most complete air conditioning installations of its kind. Fresh air, brought in and cooled to a temperature 14°F below the outside temperature, is filtered through a double bank of filters, and eight air changes per hour are provided.

10 years ago . . .

Construction of bars and saloons has been banned by the National Production Authority to conserve materials for defense purposes. . . . The Federal authority also ordered tin inventories held to a 60-day supply, and ordered a reduction of 35% in the use of aluminum in civilian products. . . . A Shreveport, La. dealer blamed government credit restrictions for forcing him into receivership. . . . Steel shortages halted Kelvinator refrigerator production.

The Mitchell Mfg. Co. 1951 room air conditioner line includes the introduction of a ⅓-hp unit rated at 4,200 Btuh. . . . Those attending the recent REMA-REWA meeting were assured that there would be an adequate supply of all refrigeration needs, including "Freon" refrigerants, in 1951.

A new dual duct air conditioning system for multistoried buildings was announced by Buensod-Stacey, Inc. . . . Automatic Products Co. of Milwaukee announced that henceforth it will be known as A-P Controls Corp.

Some 850 heat pump air conditioning units are in experimental or regular use as of this date, reported H. M. Brundage of the G-E Air Conditioning Dept. The heat pump, he declared, promises to operate at an efficiency which will bring electric space heating within the means of literally millions of people.

60 years ago . . .

From the RECOLD MUSEUM

These 50-to-60 years ago items are from the Recold Museum Library, maintained by Hy Jarvis, Recold Corp. president.

With the cost of living as high as it is, it's getting to be a crime to let good food spoil in transit and in the hands of dealers. The government is making laboratory tests of bacteria that produce spoilage, and U. S. Dept. of Agriculture studies have developed methods of spoilage control, including the important use of refrigeration, and is putting them in operation on a commercial scale. One of the big projects is precooling, and methods of killing, dressing, packing, and shipping to permit small shippers of dressed chickens and turkeys to get the minimum spoilage.

Lau Blower Asks Suppliers for Value Analysis

ABOVE: Some 150 suppliers attended the first vendor's display sponsored by The Lau Blower Co., Dayton. During the three-hour afternoon session, product components from five plants were discussed for value comparison and analysis.

LEFT: Charles E. Miley, Lau's blower sales manager, discusses blower wheel construction with E. G. Weghorst, Ferbert-Schorndorfer Co. and W. E. Hulse, Jones & Laughlin Steel Corp.

150 View Products Made In 5 Plants At Dayton Showing

DAYTON—Showing its complete line of products to vendors for value analysis and comparison, The Lau Blower Co. was host to 150 suppliers during the company's first vendor's display, held here Oct. 27.

Under the direction of T. I. Byrd, president, and Harold E. Nemecek, vice president, purchasing, the firm's wide range of products made in five different plants were grouped for eye-to-eye and hand-to-hand evaluations in a three-hour session.

In talking with suppliers who ranged from paint and steel companies to highly specialized firms making parts no bigger than a fraction of an inch long, Byrd said the purpose of this first meeting was to thoroughly acquaint suppliers with the firm's over-all needs.

"Our expansion has been so rapid that many suppliers are not fully aware of all our products," Byrd said.

"For instance, we have special needs in our Canadian plant for home ventilating equipment; other requirements in our California plant for registers and grilles; still others in Cleveland with the humidifiers made by our Viking Air Products Div.

In Dayton, we have the manufacture of our blower wheels, assemblies, and parts, attic and household window fans, wall vanities for bathrooms and the 'Centrl-Vent' home ventilating system. In York, Pa., we make sterile plastic barrels as a result of our ownership of the Redmondson Corp. of that city.

"We spend more money each year purchasing raw materials, parts, and components than in any other phase of the business, including our labor costs. Since this amounts to several million dollars, we wanted our suppliers to see our over-all needs, make recommendations, and assist us with new and better ideas."

In the three-hour showing, major products were disassembled down to the last nut and bolt. Suppliers and key Lau personnel from the sales, purchasing, engineering, production, research, operations, and maintenance departments discussed and evaluated various parts.

"While we will not know the full effects of this meeting for some time, we believe it is a major step to secure the best materials and components for use," Byrd said.

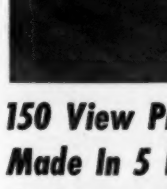
General Foam Finishes Major Addition

NEW YORK CITY—General Foam Corp. has completed a major addition to its Hazelton, Pa., plant which will give the company its first basic manufacturing facilities for urethane foam, the firm reported.

"The start of manufacturing marks General Foam's transition from operations solely as a distributor and fabricator of urethane to complete production of foam from constituent chemicals through to finished forms.

"The new 2-story, 50,000-sq ft plant is fully automated. Together with the adjoining 60,000-sq ft processing distribution plant, completed in 1957, the new unit provides the company with completely integrated facilities for the first time."

MINERALLAC



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MINERALLAC ELECTRIC COMPANY
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NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Ask your Wolverine Tube Salesman . . . He Knows

ASK HIM! He will give you the right answer because he knows his product line thoroughly—frontwards, backwards and inside out.

But there's more to him than that. When you talk to a Wolverine salesman, you're talking to a man who knows your industry and its markets . . . knows what you have to do to succeed in those markets . . . and knows how his products and services can help you achieve your goals.

Because he functions as an independent businessman, your Wolverine salesman knows firsthand many of the problems you face each day . . . has encountered them in his own business life. He is, therefore, in a better position to meet your requirements and, because of this understanding, to serve you better.

He also has the complete trust and backing of his company. When he speaks, he is Wolverine Tube's authorized representative. You'll find because of his background, education and specialized training in Wolverine's plants and offices that he is fully qualified to be of maximum assistance to you.

Talk to him the next time you order tubing . . . in copper, brass, aluminum . . . or special metals.

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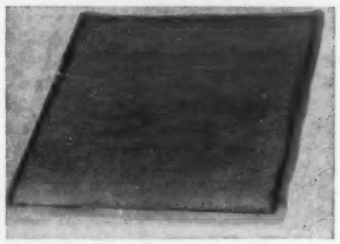
PLANTS IN DETROIT, MICHIGAN AND DECATUR, ALABAMA. SALES OFFICES IN PRINCIPAL CITIES.

Claim Longer Life, Greater Capacity for Filter

● Longer service life, increased dust-holding capacity, and ease of installation are advantages claimed for the new "Ulok" flat filter announced by Union Carbide Development Co., division of Union Carbide Corp., Dept. AH&RN, 270 Park Ave., New York 17, N. Y.



Higher operating efficiency throughout useful life is attributed to the filter's construction, which is of "Dynel," a strong fiber with a highly-irregular cross-section that stops and holds unusually large quantities of dust, and is resistant to oils and adhesives, the company said.

"This new media formation provides a low density three-dimensional batt," it was pointed out. "The entire face and depth of the filter trap dirt particles as the inherent strength of the media permits the elimination of face supports and the batt construction permits depth loading.

"Another feature of the special construction is a ring support that permits the filter to seal itself in the holding frame as well as to extend beyond the edge of the ring insuring a compression fit around all edges. This eliminates the problem of filter by-pass.

"The air cleaner was subjected to extensive tests by a well-known independent research laboratory prior to its introduction. Laboratory reports revealed a pressure drop of .115 and .07 at 300 cfm for filters of 20 by 20 by 2 in., and 20 by 20 by 1 in., respectively.

The disposable filter comes in nine standard sizes from 10 by 20 to 24 by 24. Specified sizes are available on request.

Refrigerators Designed For Boats, Yachts

● Called the "Mariner" and the "Helmsman," two compressor-powered refrigerators designed especially for boats and yachts have been introduced in the United States by Lec Refrigeration Ltd., Dept. AH&RN, Bognor Regis, Sussez, England.

With the hermetically-sealed Lec compressor and a transvertor unit, they are adaptable to operate off any battery supply, 12 or 24 volt, or with a selective switch fitted as an optional extra, they will operate from the standard 115-volt, 60-cycle supply.

The 2-cu ft Mariner has a pale blue plastic interior fitted with two plastic covered shelves with door storage for eggs and bottles. The 4-2-cu ft Helmsman also has a pale blue interior and is equipped with three shelves, door storage for eggs, butter, and bottles, and a freezer compartment for the short-term storage of frozen foods, it was stated.

Gas, Oil Furnace Models Added to Line

● The addition of two gas and oil models to its furnace line has been announced by the Waterman-Waterbury Co., Dept. AH&RN, 1121 Jackson St., N.E., Minneapolis, Minn.

"The models, named Comfortrol (8 series) and Comforclime (7 series), incorporate the latest forced warm air features," it was stated.

"The new Comfortrol is designed primarily as a 'face and by/pass' system which combines separate heating and cooling components into one coordinated unit. Through a specially designed damper section and an indoor-outdoor thermostat system, desired room temperature can be maintained with less than 1° variation. The outdoor thermostat automatically signals the burner and damper controls to build up an extra amount of warmth in the furnace to be available the instant it is needed in any room."

Both units have Waterbury's "wrap-around" heat exchanger, large filter, deluxe Minneapolis-Honeywell controls, baked enamel finish, and are "Bonderized" for rust and corrosion protection, it was pointed out.

"The streamlined appearance of the units and Waterbury's new Aqua Green color are expected to aid in sales. Both the Comfortrol and Comforclime are available in four sizes. The gas Btu is rated 100,000, 125,000, 150,000, and 175,000 input and the oil Btu at 84,000, 112,000, 140,000, and 168,000 at bonnet."

This seal helps you guarantee unitary air-conditioning performance*

Purchasers want—and deserve—assurance of satisfactory equipment performance.

The ARI Seal of Certification offers *you—and* your customers—such assurance. The Seal appears only on equipment that meets industry-approved performance standards, and that is subject to a grueling test conducted by an independent laboratory. Any model failing to deliver rated capacity must be brought up to standard or the Seal is withdrawn.

All capacity ratings are based on a uniform set of standard conditions—expressed in Btu per hour.

The 51 leading manufacturers who support the ARI program are helping you guarantee customer satisfaction. Once installed, ARI-certified equipment will deliver rated cooling. That means fewer customer complaints, fewer service calls, less repair and replacement expense.

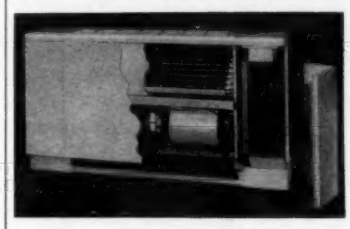
How's that for a guarantee?

*"Unitary" air-conditioners included in this program: all packaged air-conditioners, single units or two-piece units (called "split" systems), designed to be used together, up to 135,000 Btu per hour (Btuh) in capacity, not including room air-conditioners. ARI Standard 210-58 for electrically-driven equipment; ARI Standard 250-58 for heat-powered equipment.

For free explanatory booklet and Directory of participating manufacturers, write to: Chief Engineer, Dept. A-1105

Air-Conditioning and Refrigeration Institute

1346 Connecticut Avenue, N.W., Washington, D.C.



Fedair Line Has Remote, Free-Standing Models

● A complete new line of Type "F" Fedair remote air conditioners with free-standing and recessed floor models and exposed and concealed overhead models is announced by the Heating Div. of Fedders Corp., Dept. AH&RN, Lalor & Hancock Sts., Trenton 7, N. J.

"Free-standing floor models measure only 8⅝ in. thin from front to back, making them unusually compact both for new and modernizing installations," according to the division.

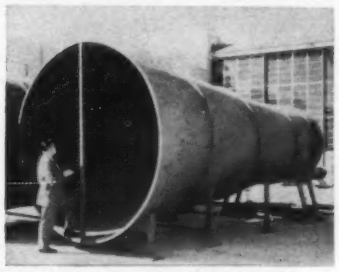
"New and exclusive features of the fan coil units include snap-on front panel, completely insulated coil compartment, factory installed manual air vent, 1,080 rpm fan motor with high capacity blowers for unusually quiet operation, fan motor disconnect plug, tap wound motor which eliminates reactor for pushbutton speed control. Coil is designed for use with chilled water and hot water for year-round use."

Basement Model Furnace Uses Variety of Fuels

● A new BTS 200 gas-fired "Air-Ease" basement model, input 200,000 Btuh, for natural, mixed, manufactured, or LP gas, has been announced by The Johnson Furnace Co., Dept. AH&RN, 2129 West 117th St., Cleveland 11.

This model is shipped assembled in two sections. The heating section is completely wired, with all controls installed at the factory. The blower section is simply bolted to the heating section and the wires connected to the blower motor, to complete the unit on the job, it was pointed out.

This unit is also available for oil firing (BTL 200), with a firing rate of 1.6 gph and a bonnet capacity of 180,000 Btuh. These new larger units widen the size range of assembled gas and oil-fired Air-Ease basement models.

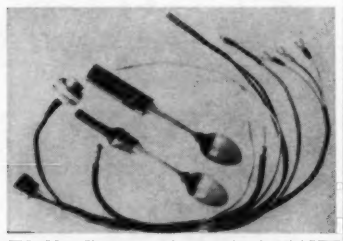


Line of Axial Flow Blowers Bows

● A new line of axial flow blowers for heating, ventilating, and air conditioning has been announced by the Commercial Blower Div., Benton Mfg. Co., Dept. AH&RN, Kansas City 27, Mo.

"The range of sizes is so extensive that it will cover nearly every industrial requirement for these blowers will handle from 1,000 cfm to over 500,000 cfm with pressures from atmospheric to 10 in. of water static pressure with single stage units," the announcement said.

"The range of sizes is up to 12-in. diameter in the fixed blade design and from 14 in. to 120-in. diameter in patented blade retention designs. The standard hub diameters available, which use this patented feature, are in various sizes from 14 in. to 40 in.



Wire Harnessing Method Said To Reduce Costs

● A new method of wire harnessing and cable assembly "which eliminates costly taping or lacing wire assemblies" has been announced by Foley Electronics Co., Dept. AH&RN, 4810 Calvert Rd., College Park, Md.

"The new technique, which combines the advantages of electrical tape and tough, abrasive-resistant insulated sleeving, substantially reduces the cost of wiring assemblies and harnesses," the company said.

"Using special vinyl tubing which, when cured, contracts tightly around the encased wires, assemblies are made up with the characteristics of custom-made cable. The tubing is also available cut to desired lengths with special instructions provided for those assembling their own harnesses."

Adds Valve for Use With Hydronics

● Addition to its hydronic products line of the "Electro-Zone" valve for economical zoning of residences, motels, apartment houses, etc. for both heating and cooling has been announced by Hydrotherm, Inc., Dept. AH&RN, Northvale, N. J.

"Electro-Zone differs radically from motor operated valves," the company stated. "It has a single moving part which is magnetically actuated and which is completely immersed and damped in the fluid. It works without the use of 'O' rings and packings.

"The valve can be used with any standard low voltage, two-wire thermostat and requires only two low voltage connections."

3 Dehumidifier Models Introduced

● Three dehumidifier models, one with overflow controls as standard equipment, have been introduced by Westinghouse Electric Corp., Dept. AH&RN, 300 Phillippi Rd., Box 2199, Columbus 16, Ohio.

The models are the "Deluxe," "Custom Deluxe," and the "Custom Supreme." The latter has the automatic water overflow control as a standard feature. It is available as an accessory on the Custom Deluxe.

"When the overflow container is full, the unit automatically shuts off," it was noted. "When the container is emptied, the dehumidifier resumes normal operation."

An additional feature of the Custom Supreme is a humidistat giving the owner a choice of "Dry," "Extra Dry," or "Continuous Run" conditions. New increased capacity of this model removes up to 37 pints of moisture from the air in 24 hours while protecting an enclosed area of 18,000 cu ft, according to Westinghouse.

It has pearl cabinet, aqua blue grille, gold humidistat dial, and chrome trim.

The Custom Deluxe model is styled in mint green, has a mist white grille and gold humidistat dial. It contains such features as the automatic humidity control and ability to remove up to 33 pints of moisture daily while protecting up to 16,000 cu ft, the company said.

Both the Custom Supreme and Custom Deluxe models have casters, a 10-qt plastic container "easily accessible at the back of the cabinet," and an 8-ft electrical cord.

Styled in shell white cabinet and a burnt orange grille, the portable Deluxe model "protects up to 10,000 cu ft of enclosed area, wringing up to 23 pts of moisture from the air in 24 hours, it is explained.

Want More Details?

ADDITIONAL details on products that are described on these pages may be obtained by writing the manufacturer at the address given in each What's New story.

Tell him: "AH&RN sent me!"

Thermometer Combines 3 Adjustment Features

● A new liquid-in-glass industrial thermometer was presented recently by Weksler Instruments Corp., Dept. AH&RN, Freeport, N. Y.

The patented instrument combines three adjustment features said to permit complete 360° change of angle on the case and stem, plus variations of stem length. All adjustments can be made in the field and need not be specified when ordering.

"A new lightweight die cast case, designed by George Goscho Associates, gives it a new look," it was stated.

HOME BUYER SAYS:
sold me on my new home"
Perkin-Elmer found—
Air conditioning paid for itself in three years through greater employee efficiency in their Norwalk, Conn. plant
DU PONT
AFTER

Continuous advertising to your customers helps expand the market for your equipment . . . backs your selling efforts . . . by reaching your customers in leading publications such as "Business Week", "House & Home" and others . . . year after year.

Top quality, sure—and look at all the extras you get with Du Pont FREON®

You get a lot more than the highest-quality refrigerant when you specify Du Pont "Freon". Just look at the valuable "pluses" obtainable *only* from Du Pont:

Your customers know "Freon" best—Whether you sell large installations or small, home units . . . the best-known, most widely accepted refrigerant among your customers is "Freon".

Unchallenged reputation for quality—Equipment makers and their customers accept "Freon" as the standard of quality for the industry . . . and that reputation is maintained by the most rigid quality-control methods.

Experience, research without equal—The pioneer and largest producer of safe, dry, acid-free refrigerants, Du Pont is also the leader in advanced research . . . assuring you of top quality now and in the future.

Outstanding delivery record—For fast, dependable delivery "Freon" has a record no one can match . . . and it gets better all the time. Four plants are located strategically to assure this type of dependable service.

Most complete, direct marketing and technical help—Expert *personalized* services . . . based on years of marketing and practical-application research . . . are available to you—an unparalleled contribution that Du Pont makes toward building the refrigeration and air conditioning industry . . . *your* industry.

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

E. I. DU PONT DE NEMOURS & CO. (Inc.), "FREON" PRODUCTS DIVISION, WILMINGTON 98, DELAWARE

Worthington Distribution Center To Serve Central West Zone

THREE QUARTERS of a million pounds of Worthington Corp. package air conditioning units were delivered here to the firm's newest distribution center at 1627 Main St., Kansas City, Mo. from the company's Decatur plant.

KANSAS CITY, Mo.—A new distribution center for air conditioning equipment to serve Worthington industrial and commercial customers in the 12 states between the Mississippi and the Rocky Mountains has been opened here recently by Worthington Corp.

W. G. Dorsey, central west zone manager, said the new center was established here following a pilot study of one year at St. Louis.

The center is located at 1627 Main St. in downtown Kansas City.

Initial stock for the center was shipped in an 18 truck-trailer convoy from Worthington's Decatur, Ala. plant. It consisted of packaged units ranging in size from 3 to 60 tons and valued at more than $500,000. They weighed 750,000 lbs.

Bolton Air Conditioning Gets Raleigh Contract

RALEIGH, N. C.—Bolton Air Conditioning & Heating Co. here had the contract for installation of a Worthington hermetic centrifugal refrigeration system in Raleigh's new Municipal Building on S. McDowell St.

Thermal Industries Gets Hospital Job

MIAMI, Fla.—Thermal Industries of Florida will install air conditioning systems in two new hospitals now under construction: Osteopathic at 1750 NE 167th St. and Cloverleaf, 16951 NW Second Ave.

10% Invested In Cooling Would Boost Usefulness of School Buildings 25%, Petrone Tells Typhoon Distributors

WASHINGTON, D. C.—Only a 10% increase in school building costs invested in air conditioning would provide communities with school buildings with a 25% increase in usefulness, Don Petrone, president, Typhoon Air Conditioning Div., Hupp Corp., told a national meeting of Typhoon distributors.

An even greater opportunity for stretching the community's educational dollar would be the elimination of the need for many new schools if existing educational plants could be used to full capacity the whole year, he pointed out.

Petrone said schools now cost communities $20 per square foot to build, and can only be used nine months of the year because of the hot weather. If another $2 a square foot were spent for air conditioning, he stated, communities would have educational plants useful all year long, and would be able to handle a school population 25% larger without boosting the tax burden appreciably.

Petrone illustrated his proposal with the example of a school district with ten primary schools capable of handling 6,000 pupils but faced with a school population of 7,500.

Now the educator has only one choice, to ask for three more schools. However, he said, if the existing schools were air conditioned and operated all year, they could easily handle the additional 25% student population, and all ten schools could be cooled for the cost of only one new school.

Anyone in the building business will confirm that school buildings that must lie idle one-fourth of the year because of the temperature are the most expensive structures being built, Petrone claimed. If a store or office building had to operate the same way, the cost of doing business would be virtually prohibitive, he pointed out.

In too many communities across the country educational leaders are forced to run schools on two and even three shifts to fit everyone in. Nobody pretends that this is the best solution. But these same educators know that without air conditioning summer month classes to relieve the overcrowding would not be worth the effort once the temperature reached 80, Petrone noted.

Holding and attracting good teachers would prove easier if schools were air conditioned and running all year, he indicated. School boards would be able to offer teachers full employment at adequate salaries rather than forcing them to take three-month "vacations" that drive them into the summer labor market to supplement teaching salaries, Petrone said.

Summer vacations for our children have become a habit in urban communities only because there was nothing else to do, Petrone explained. But faced as we are with obvious ceilings on real property taxes, this appears not only the most logical solution to the problem, but one of the most economical.

There might be objections, he noted, as some people would be tempted to say that summer classes would take away from their children their only really good vacation time.

Petrone said few parents have ever noticed any difference in summer and winter between a child's desire to get outside for healthy exercise. And a winter vacation for the whole family that wouldn't disrupt school schedules would appeal to many families, he said.

Air conditioning a school would be no more difficult than air conditioning the many stores, shopping centers, and low, modern office buildings Typhoon has cooled, Petrone indicated.

With factory assembled packaged air conditioning units mounted on the roof supplying cool, refreshing air to each classroom, exactly as the school authorities wanted it, the booming school population would be better able to concentrate on the challenge education for the future demands, he concluded.

Air Conditioning To Preserve Art Pieces

WICHITA, Kan.—Central Air Conditioning Co. entered the successful low bid for air conditioning the Art Museum at $16,772, it was reported recently.

The air conditioning is to include humidity control to help reduce deterioration of the paintings. Lack of climate control at the museum had brought alarmed reports of the poor condition of some of the art works.

Albuquerque's New Bank Gets Air Conditioning

ALBUQUERQUE, N. M.—Gas air conditioning equipment has been installed in Albuquerque's new Bank of New Mexico building, tallest in the state.

Representatives of Southern Union Gas Co., which will supply fuel for the 307-ton air conditioner, claim that the unit will be the largest in use in a commercial office building in Albuquerque.

Bridgers & Paxton, consulting engineer in Albuquerque, designed the gas air conditioning system for the building, which is scheduled for completion in December. Manufactured by The Trane Co., the gas unit is approximately 22 ft long, 8 ft high, 7 ft wide, and weighs 14 tons.

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ENGINEERS
MANUFACTURERS

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on a 4¢ INVESTMENT

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TO MAKE BIG MONEY WITH VORNADO, WRITE TODAY:

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SERVICE DIVISION
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A Division of Automatic Radio Mfg., Inc. World Famous for Over 40 Years

"I'm an 'expert' on AIR CONDITIONING"

What he means by air conditioning and what you mean by it are as far apart as the poles. He may be an "expert" but if you really want a full picture of the latest developments in air conditioning, you can do this best at the Heating & Air-Conditioning Exposition.

Top executives, salesmen and design and production engineers will be on hand to provide specific information and money-saving tips about use of related equipment, more efficient methods of installation, maintenance techniques and anything else they know from which you can profit.

More than 500 companies participating will constitute the most concentrated and versatile range of heating, refrigeration, air conditioning, and ventilating systems, equipment, and components available and applicable to your needs. *Plan your visit now!*

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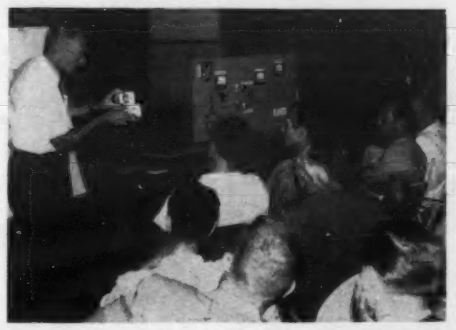
Auspices ASHRAE
CHICAGO, ILLINOIS
International Amphitheatre
Feb. 13-16, 1961
Management:
INTERNATIONAL EXPOSITION COMPANY
480 Lexington Ave., New York 17, N. Y.

Lennox Service Personnel Convene

THOSE WHO ATTENDED the 1960 service conference which was held by Lennox Industries, Inc. at its headquarters in Marshalltown are shown above. "This group," said Lennox President John Norris, "is the finest collection of mechanical ability for heating and air conditioning ever assembled. Representing all areas of the U.S. and Canada, these men intimately know the varying climates, needs, and problems from coast to coast. From this meeting comes direction for new products and for better installation and servicing techniques." Unless otherwise noted, the individuals in the picture are stationed at Marshalltown. Left to right they are: Donald R. Wheeler, chief application engineer, Calgary; William P. Wassmer, service manager, Salt Lake City; Calvin Cheek, assistant to general manager, Decatur, Ga.; Don Johannsen, heating service manager; Sidney Parker, gir aonditioninc product improvement, Fort Worth; R. Warren Eichorn, chief engineer-gas products; John W. Norris, Lennox president; George E. Gleason, heating service manager, Syracuse; Richard D. Miller, chief engineer, electrical; Coit B. Lytton, sales manager, Columbus Ohio; William Dirk, factory manager, Fort Worth; J. Harold Bragg, factory manager; Glenn H. Fisher, assistant director of manufacturing; DeVerle Brannon, assistant service manager, Fort Worth; Jack Nichols, service manager, Toronto, Ont.; John R. Greiner, research administrative engineer; Stewart L. Segerstrom, service manager, Syracuse; Richard S. White, general manager, Decatur, Ga.; F. H. Whitcombe, director of manufacturing; Graydon Peoples, chief engineer, oil development; Melvin R. Brown, chief engineer, air conditioning; Howard Pitts, service manager, Fort Worth; Charles Belt, director of air conditioning product development, Fort Worth; Lowell Trepp, air conditioning service manager, Los Angeles; Kenneth W. Behr, chief application engineer; Russell Crotwell, manager, air conditioning department, Los Angeles; Lynn O'Dell, air conditioning service manager.

'Service Circle' Meeting In Los Angeles Covers Heating, Cooling Control Problems



"TROUBLE SHOOTING air conditioning controls" was discussed by General Control's field representative Ray Faille in the recent "Service Circle" meeting sponsored by the Institute of Heating & Air Conditioning Industries.

LOS ANGELES — Some 75 heating and air conditioning service personnel attended the recent General Controls Co. "Service Circle" meeting sponsored by the Institute of Heating & Air Conditioning Industries.

Held in the Southern California Gas Co. auditorium here, the session included discussions of servicing air conditioning and heating controls, advice on installation and special problems encountered by servicemen. Visual aids, provided by the controls manufacturing company, were widely used to demonstrate procedures.

Four 25-minute sessions, each dealing with a separate subject, were conducted simultaneously by a quartet of General Controls field representatives. At the end of each instruction period, groups rotated to new sessions, allowing each registrant to receive the benefits of all four units in one evening.

From General Controls, field representative Ray Faille discussed techniques of "Trouble Shooting Air Conditioning Controls," and Tom Tatone presented "Service Hints on Pilot Safety Devices, Thermo-Pilot Valves and Relays." "Quick Servicing of Millivolt, Self-Generating Systems and Components" was Raplh Taylor's topic, while Nels Hartleben demonstrated "Diagnosing and Correcting 24-Volt Heating Systems, Thermostats, and Valves."

Arrangements for the "Service Circle" were handled by A. B. Wicks, code advisor for the IHACI, and Robert L. Farmer, General Controls' manager of product training and services.

San Francisco RSES Class Enrolls 32

SAN FRANCISCO — A term one study class with 32 Refrigeration Service Engineers Society members enrolled has been started here with a classroom furnished by a refrigeration plant at 1901 17th St.

The RSES service application manual is being used for a text with supplemental material made available by the instructors who are Fred Pound, president of Golden Gate chapter, RSES, and T. R. McLean, air conditioning plant manager. The class meets Wednesday evenings.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Midwest RSES Honors Bopp

For Aiding Growth

MARINETTE, Wis.—An honorary membership in the Midwest Association of Refrigeration Service Engineers Society was awarded recently to John Bopp of Ansul Chemical Co. here.

The membership was presented as a surprise at the annual banquet of the association in St. Joseph, Mo.

The presentation included the traditional badge of membership of the honorary group, a Western-style tie.

Bopp also received an official thanks for his contributions to the growth of the association which covers the states of Oklahoma, Kansas, Missouri, and Arkansas.

MIGHTY MITE PROTECTS MOTORS Against OVERLOADS OVER VOLTAGE UNDER VOLTAGE

MECHANICAL INDUSTRIES PRODUCTION CO.
223 Ash Street Akron, Ohio
SAA 3335/848

Chiller Package Is 'Designed With the Serviceman In Mind'

DETROIT — "The design of our dual compressor package chiller makes it possible for the normal independent serviceman to take on large tonnage service at commercial and industrial installations. This service goes to a factory engineer or serviceman when centrifugals are used."

J. T. Maloney, product consultant, Acme Industries, Inc., emphasized the serviceability of Acme's new equipment in his talk to the local chapter of Refrigeration Service Engineers Society.

"The dual compressor setup is used on equipment supplying from 40 to 250-tons refrigeration," Maloney said. "The alert independent serviceman can learn to handle the service on these accessible hermetic units and systems, and he can increase the potential of his business by going after larger jobs which, until now, he has had to avoid."

The installing contractor also derives benefit from the installation of a large-tonnage package chiller when compared to installation of a comparable centrifugal, according to Acme. Maloney claimed nine advantages over centrifugals:

"1. Compactness—66% smaller;
2. Light weight—50% lighter;
3. Eliminates erection - assembly problems;
4. Installation is cheaper and faster;
5. Eliminates leveling and alignment problems;
6. Smaller refrigerant charge—50% less;
7. Factory insulated;
8. Longer motor life;
9. Quieter operation."

The Acme representative strongly urged RSES members to begin learning about larger equipment, "because there is no reason that you, the independent serviceman, should not derive legitimate advantage from the increasing trend toward commercial and industrial air conditioning."

Carrier Service Mgrs. Exchange Ideas

SYRACUSE, N. Y.—A "free exchange of ideas" was the theme of the annual Service Managers' Forum held here Oct. 31 through Nov. 4 by Carrier Air Conditioning Co.

One hundred service managers, representing Carrier distributors throughout the nation, took part in an open discussion of the latest techniques in servicing new Carrier products.

The program included a tour of the Carrier plant, a banquet, product displays, and talks by company officials. Half the time was devoted to discussion periods at which the service managers can question panels of engineers, quality control experts, and factory personnel. Questions on policy and servicing techniques were answered.

Service training was emphasized by the introduction of new training material which service managers can use to instruct Carrier dealers.

Casual living under the Sun!

Wiennie Roast & Splash Party Every Sunday Nite. Games Mon. & Fri.

FREE Pitch and Putt GOLF COURSE

FREE CONTINENTAL BREAKFAST

SAFARI RESORT MOTEL

FREE TV IN EVERY ROOM

FREE PARKING ON PREMISES

$3.50 DAILY PER PERSON DOUBLE OCCUPANCY

Above rates from Sept. 6 to Dec. 20

- Two double beds in each room
- Kitchenettes available
- 200 ft. of private beach
- A COMPLETE RESORT — near everything
- Opposite new Catholic Church
- Planned entertainment

Write or Call for Information & Reservations
Mr. Walter Mann, Mgr.
or call WI 7-4431

Oceanfront at 177th Street
SAFARI MOTEL MIAMI BEACH

Add this Plus Feature for Air Conditioning... Ventilating... Heating!

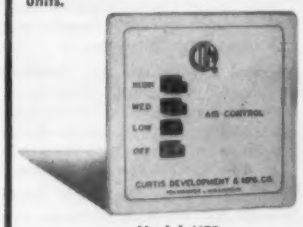
CURTIS SPEED CONTROLS Provide Sure Reliability and Overall Efficiency

Curtis SPEED CONTROLS are *ideal additions* for manufacturers of air conditioning units, kitchen exhaust fans, ventilating units, blowers, unit heaters, etc. . . . wherever shaded pole motors or permanent split capacitor motors are required.

A step-type, 3-speed (high, medium, low) & off position control unit, consisting of a reactor and a rotary or push button control switch . . . Curtis installation-proven SPEED CONTROLS offer a *new way to improve your product* . . . assuring complete customer satisfaction.

Curtis Speed Controls feature quiet operation . . . reliable UL-approved switch . . . simple, easy installation . . . reduced assembly time in factory or field . . . with outstanding performance and definite economies.

You can select from standard types and enclosures or special types and enclosures will be designed for your particular needs. Curtis Speed Controls are available for flush mounting, in completely enclosed box, for special plate mounting, and in deluxe air conditioning units.

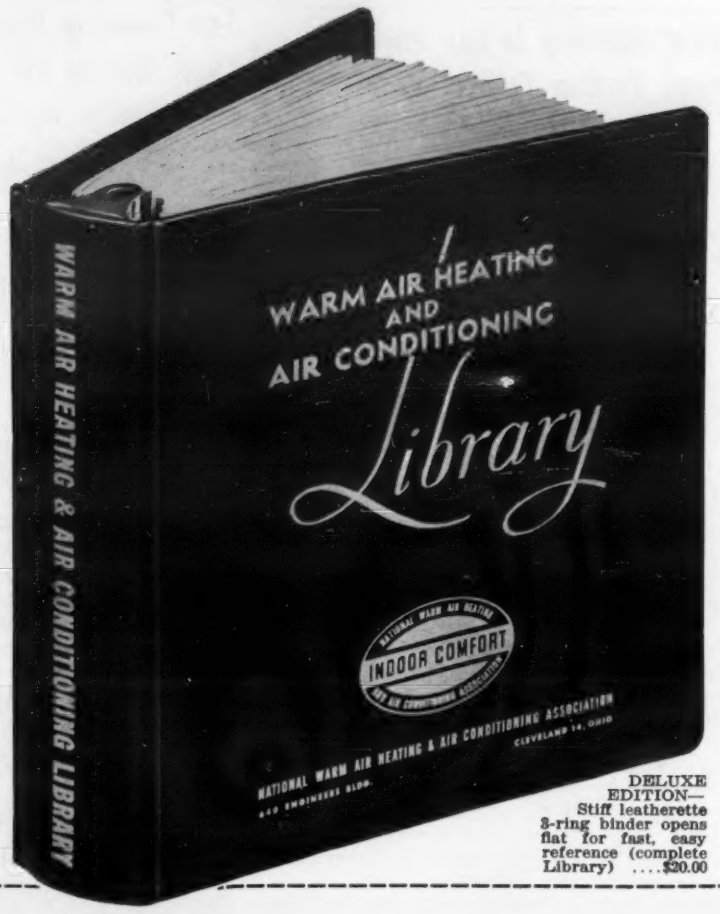


Model UTB

Curtis Flush Mount Air Speed Control . . . with reactor and push button motor speed control switch mounted on a double gang plate for flush mounting on wall in plaster type outlet box.

Write TODAY for Bulletin DS-137 giving complete information and specification sheets.

CURTIS DEVELOPMENT & MFG. CO.
3224 N. 33rd Street
Milwaukee 16, Wis.



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Warm Air Heating and Air Conditioning Digest.. $1.50
Ideal for new men entering industry and as a refresher course for experienced men. . . . Basic principles of heat transfer, comfort, air-flow in ducts, perimeter heating and other subjects. **(1st Edition)**

Manual 1 — How To Make a Comfort Survey 1.00
A complete "how to" on: Checking single house plans for heat loss calculations. . . . Taking off heating plans from architect's blueprints. . . . Computing full areas and running foot of crackage of windows. **(4th Edition)**

Manual 2—How to Check Frame House Construction 1.00
Identifies various types of framing. . . . What to look for in construction which affects installation or performance of heating systems. . . . Installation practices. **(4th Edition)**

Manual 3 — Calculating Heat Losses 1.50
Discusses design temperature and use. . . . Areas of heat transmitting surfaces. . . . B.t.u.h. heat losses. . . . Heat loss calculation and factors for all types of building materials and construction methods. **(6th Edition)**

Manual 3 — Simplified Method ..... .75
Ideal for determining heat losses for average residence. . . . Combines conduction and convection (infiltration) losses through windows and doors. **(2nd Edition)**

Manual 4 — Warm Air Perimeter Heating 1.75
Design and installation data on perimeter-loop, perimeter-radial, crawl-space radial, crawl-space extended plenum, crawl-space trunk and branch, and crawl-space plenum perimeter systems using 5" and 6" pipes. **(6th Edition)**

Manual 5 — Design and Installation of Gravity Warm Air Heating System 1.00
Location and size of water air registers, return air intakes, and furnace. . . . System layout, . . . Installation and operation. **(Fifth Edition)**

Manual 6 — Adjusting Air Conditioning Systems for Maximum Comfort 1.25
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Gibson Describes 1961 Room Air Conditioner, Dehumidifier Lines

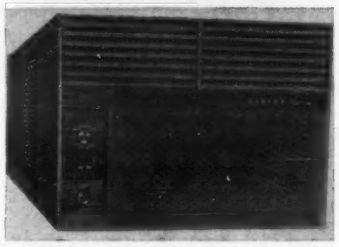
GREENVILLE, Mich. — Four series of room air conditioners plus a Texan model are being offered by Gibson Refrigerator Div., Hupp Corp., along with a three-model dehumidifier line.

The four series are designated "T," "A," "B," and "Slumber Master."

The "T Series" units are designed with smooth slides for versatility of mounting including through the wall, casement windows, flush inside, or flush outside.

Styling features include inlaid wood grain trim, simplified easy to read gold controls, neutral beige color, and decorative condenser grille on the rear.

"All models have Gibson's exclusive air sweep and the T-190-S has automatic built in Air Sweep," it was stated. "Other selling points are 2-speed zinc plated turbine type blowers on both evaporator and condenser for ultra quiet sound level both inside and out. The unit also features fresh air and exhaust, "C" setting for constant cooling, and easily accessible germ killing filter.



GIBSON B model room air conditioner.

The "T Series" consists of six models. Three are regular air conditioners and three are reverse cycle heat pumps. Specifications are as follows:

Model	Btu	Hp	Volts
T-190-1S	9,000	1	115
T-1150-2	15,000	2	230
T-1150-8	15,000	2	208
Reverse Cycle Heat Pumps			
T-185-2R	8,500	1	230
T-185-1R	8,500	1	115
T-1145-2R	14,500	2	230

All three heat pump models have additional auxiliary electric heat built in or available as an accessory.

All the "T Series" models are 15¾ in. high and 26 in. wide. Models T-190-1S, T-185-2R, and T-185-1R are 17 in. deep. The others are 22 in. deep.

The "A Series" of room air conditioners offers Air Sweep on all models. Following the automotive pattern, Gibson is offering automatic Air Sweep as an accessory to increase dealer margins as much as 50%, according to W. H. Winn, national sales manager, room air conditioners.

Features of the restyled series include "automatic built in thermostat, 2-speed turbine type blower, fresh air control, 'C' setting for constant cooling, germ killing filter, and all galvanized steel construction which more than doubles the life of the unit even in seacoast areas," it was pointed out.

"There are three models in the 'A Series.' Model A-185-1 has Btu capacity of 8,500. Current characteristics are 1 hp, 110 volt. Dimensions are 15$\frac{9}{32}$ in. high, 23⅛ in. wide, 18$\frac{3}{16}$ in. deep. Model A-185-2 and A-185-8 are identical but the former operates on 230 volts, and the latter operates on 208 volts.

Gibson's "B Series" are "giant capacity 16,500 Btu models which are compact enough to fit even the narrowest 24-in. window," the announcement said.

Among selling points are fresh air and exhaust, 2-speed turbine type blower, built in thermostat, "C" setting for constant cooling, all galvanized steel construction, and germ killing filter.

Model B-1165-2 is a 2-hp model which operates on 230 volts. Dimensions are 17$\frac{15}{16}$ in. high, 28⅛ in. wide, 23$\frac{13}{16}$ in. deep. Model B-1165-8 is identical but operates on 208 volts.

Specially for Bedrooms

The Slumber Master room air conditioners are a compact series designed and built specifically for bedrooms.

Gibson Sales Vice President W. C. Conley compares the unit to compact cars stating that consumers who wish to cool their bedrooms can purchase this unit for lower initial cost and enjoy lower operating costs with lower sound level.

Selling points include 2-speed turbine type blower, air silencing chamber, built in automatic thermostat, ventilation, simplified controls, all galvanized steel base, and germ killing filter.

Model D-1551 is a 1-hp, 115-volt, 7½-amp model measuring 12½ in. high, 17¾ in. wide, and 15¾ in. deep.

Model D-1551-K is identical to the D-1551 but comes with Gibson's gold anodized aluminum "Expando Mounting" kit built in, enabling the consumer to install the unit themselves "in a matter of minutes," according to Gibson.

Texan Model

The 1961 Texan room air conditioner model G-1220-2 has an improved and recircuited evaporator that is said to boost its cooling capacity to 22,000 Btu.

J. F. Klintworth, manager of room air conditioner sales, states that the new Texan is a compact 2½-hp unit designed to fit in the same space formerly required for 1-hp models and perform at the same low inside noise level as 1½-hp models.

GIBSON SLUMBER MASTER air conditioner is a compact unit built specially for bedrooms. It is said to feature low initial cost, low operating cost, and low sound level.

Other features include Gibson's air sweep for four corner cooling, "C" setting for constant cooling, fresh air and exhaust, 2-speed turbine type fan, air silencing chamber, and germ killing filter.

Klintworth said the 16⅝-in. high silhouette permits installation in transoms and basement windows. Other dimensions are: 27$\frac{15}{16}$ in. wide and 34 in. deep.

Dehumidifier Line

Gibson's 1961 dehumidifier line offers three models "each with logical 'step-up' features for the ever growing dehumidifier market."

All models show increased emphasis on styling and complete new design with inlaid wood grain trim, recessed dashboard slanted control panel, and air grilles that are designed so that the insides of the units are not visible from any angle. All models also feature ⅛-hp Gibson "Scotch Yoke" compressors and all copper coils and condensers.

Model DH-10 has a decoratively styled 8-qt water container which is removable from the front, and ball bearing casters.

Model DH-11 has these features in addition to a built in humidistat as a step up sales point. Model DH-12 incorporates all the features of the DH-10 and DH-11 in addition to an automatic shut-off overflow control with signal light.

Dimensions of all Gibson dehumidifiers are: 19$\frac{5}{16}$ in. high, 12¾ in. wide, and 21⅛ in. deep.

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CHICAGO—Heating & Cooling Products, Inc. announced that it is now located in new, larger warehouse and offices at 527-539 E. Illinois St. (dock doors 52 and 53), Chicago 11.

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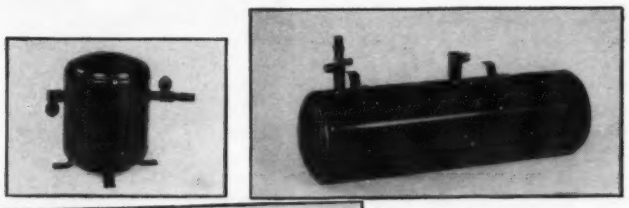

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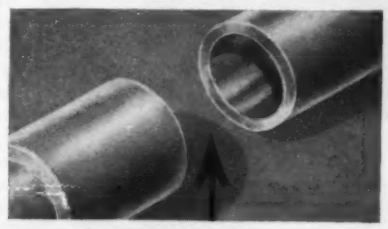

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TECH CENTER

by Frank J. Versagi, Technical Editor

Vent Connectors: *Type B vs. Single Wall*

The information which follows is available from Gas Vent Institute, 333 N. Michigan Ave., Chicago. Ask for Bulletin #2.

There is a rapidly-growing trend toward restriction and elimination of single-wall (Type C) gas vent connectors.

This welcome trend has become quite evident in recent months. It promises to be of far-reaching importance to building officials and gas utilities who are jointly responsible for public health and safety and for the safe utilization of gas.

Before discussing the matter in detail, let us examine the function of the vent connector. A "vent connector" is defined as that portion of the vent system which connects the gas appliance to the vent or chimney. Such connectors were born during the 1920's when newly-installed gas appliances were frequently connected to existing masonry chimneys or to unglazed terra cotta or clay vents.

These primitive venting methods have long since fallen into obsolescence. Clay and terra cotta vents are no longer used, and the masonry chimney is rapidly losing favor with the gas heating industry. Yet the equally-ancient concept of the "vent connector" has persisted, perhaps because it represents a cheap substitute for proper gas venting.

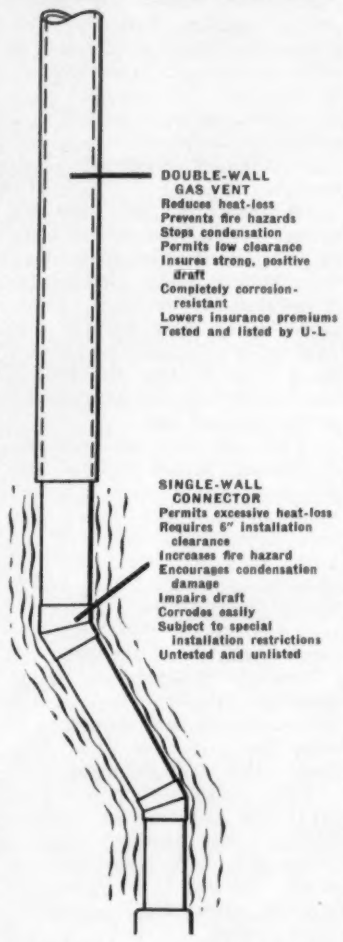
Generally of thin-gauge galvanized steel, the vent connector is simply a single-wall pipe used with or without elbows to connect a gas appliance to its vent. The connector is, of course, untested and un-listed. It possesses little or no insulating value and offers such limited corrosion resistance that it can only be used in an open space where visual inspection is possible at all times.

Fire Hazard Considerable

The fire hazard inherent in these vent connectors is considerable. This is shown by the fact that a clearance of 6 in. is required between such a connector and any combustible construction, while only 1-in. clearance is required with listed double-wall gas vents.

Many gas venting problems are erroneously blamed on the vent, when actually they are caused by the use of single-wall vent connectors. The phenomenon of condensation is a convincing example. It is known that condensation occurs in a gas vent only if the flue gases are cooled below their dew point, and it has been repeatedly shown that the heat loss from single-wall vent connectors is often sufficient to cause condensation and impairment of draft.

The elimination of single-wall vent connectors will prevent these problems. Such a step will also reduce fire hazards, prevent leakage resulting from corrosion-failure of the connector and eliminate the spillage of flue gases into the structure which so frequently accompanies draft impairment.



A COMPARISON of double-wall and single-wall gas vent charac.eristics.

The shortcomings or inadequacies of single-wall (Type C) vent connectors have been recognized in print by the American Gas Association. In its booklet Z21. 30-1959 titled "Installation of Gas Appliances and Piping" AGA states that single-wall vent connectors should not be located in a crawl space or other area which may be cold. AGA further states that such vent connectors shall not pass through any floor or ceiling. And it is significant that both NBFU and NFPA Standards No. 54 parallel these requirements.

Listed double-wall gas vents, because of their superior insulation and over-all excellence, are not subject to these limitations. They can be installed in heated or un-heated areas alike and can freely pass through floors, ceilings, partitions, walls and roofs, provided the required 1-in. clearance is observed.

Recently, AGA has published extensive data and test results covering the performance characteristics of single and double-wall gas vents. (AGA Research Report No. 1300). The report states that a large portion of the flow-resistance in a gas vent occurs *in the vent connector.*

This is due in part to excessive heat loss from the poorly-insulated single-wall vent connectors, and is a telling argument favoring the elimination of such connectors. In contrast, double-wall gas vents confine the heat INSIDE the vent. This added heat provides more than enough extra venting power to overcome flow resistance.

Another recent authoritative statement concerning single-wall vent connectors occurs in the current Gas and Oil Equipment List published by Underwriters' Laboratories, Inc. This statement reads as follows:

"Gas vent pipes and the allied parts listed in conjunction therewith are designed to be assembled with their companion parts of the same make and style named in the individual listings, as Type B or BW Gas Vents to form a continuous passageway from the gas appliance to the terminus of the vent above the roof including the cap or roof assembly."

The use of Type B gas vents *continuously* from the appliance to the vent cap, as outlined by U-L, will eliminate the need for single-wall connectors. In so doing, it will also eliminate the many venting difficulties traceable to these poorly-insulated and old-fashioned connectors.

Capehart Housing Requires Use of Double-Wall Venting

In keeping with the trend toward using only UL-listed gas vents, some administrative agencies are already taking steps to eliminate the use of unlisted single-wall vent connectors.

For example, the specifications for many Capehart Housing Projects require double-wall gas venting throughout. Other specifications covering schools, colleges, and institutions carry similar requirements.

In addition, installation standards of the Mobile Home and Travel Trailer industry now prohibit single-wall vent connectors by requiring listed Type B gas vents exclusively.

There is really no scientific justification for the continued use of single-wall vent connectors, especially now that modern, UL-approved gas vents are available in all areas and at such low cost. These old-fashioned connectors constitute the one remaining weakness in gas vent design, the elimination of which will mean a substantial step forward in gas vent performance standards.

In recent years, the use of gas as a heating fuel has experienced a tremendous increase. Gas now leads all other fuels in residential heating, having more than doubled in sales volume since 1951.

This rapid increase has demonstrated, in a great many cases, the need for improved gas venting codes which take into consideration the advances which have been made in gas vent design.

Codes must be promulgated which will insure safe, trouble-free operation of the appliance.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Applied Electrical Theory

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Westinghouse Expands Cooling Lines--

(Continued from Page 1, Col. 5)

pressors, coils, and others in our products must be at least equal to the best available in the industry in over-all performance, and we will continue to invest large sums in research and development to accomplish that end.

"3. We will continue to reduce costs, without sacrificing quality."

Included in the new products for 1961 will be eight different packaged water chillers; five condensing units; five compressors complete with control cabinets; a 7½-ton roof-top unit; nine air-cooled condensers; a humidifier; and a new residential unit.

Meckstroth added that a minimum of one new or improved product will be introduced during each of the next 14 months. He said, "Introduction of large numbers of products only once a year work against the best interests of the planned schedules of our distributors. Our 1961 product program involves the introduction of several new products now, and more throughout 1961 to remove this difficulty."

R. L. Sherrill, product sales manager for commercial and industrial equipment, reviewed the new product lines in his area.

Packaged Water Chillers

Eight packaged water chillers (model PKB), in ratings from 20 to 100 tons, were described. According to Sherrill, these units incorporate the new Guardistor overtemperature control circuit that provides positive compressor motor protection against overheating from any cause. In addition, quick-trip overload heaters are included for positive six-second kick out on any overload condition, even on cold start. The larger units, rated at 60, 80, and 100 tons, have twin compressors that provide for step starting, demand charge savings, and protection against complete loss of service in the event of failure of one system.

Several other combinations of the various components used in the new line of water chillers were also announced. Sherrill described five new condensing units (model CNU) in sizes from 20 to 60 tons. These assemblies include starters, safety controls, gauge panel, and all internal control and power wiring between control center and compressor motor. The "Guardistor" motor circuit is also included on the compressor for protection against overheating; the shunted quick-trip overload relays also give split second protection against excessive instantaneous motor currents.

Hermetic Compressor Units

The hermetic compressor units (model CLS), used on the chillers assemblies and on the condensing units, will also be available as separate components. These will be available in five sizes, from 20 to 60 tons. The CLS units will include a separate control center for wall mounting. The control center included all safety controls and internal wiring, pressure connections, and wiring between control center and compressor.

The units will be shipped as two separate pieces, so that the control can be wall mounted before appropriate electrical connections are made to the compressor. According to Sherrill, these lines of equipment represent a positive solution to the problem of motor protection for both industrial and commercial applications.

Roof-Top Heating, Cooling Unit Bowed

To take advantage of a fast growing market, a new roof-top heating and cooling unit (model CRU) was introduced to the distributors. The new unit is rated at 7½ tons and is divided into two separate sections, one for heating, the other for cooling, to facilitate handling and shipping. The heating section consists of two fans on a common shaft, a fan motor, filters, and two 100,000 Btuh input duct type furnaces.

An air-cooled condensing unit, evaporator coil, and control box comprise the cooling section. Each section is mounted on a 4-in. channel iron frame and enclosed in light weight aluminum panels. The two-piece construction will be easy to load and lift to any roof-top installation, it is stated, since the heaviest element is only 1,200 lbs.

Installation economies are further afforded since the complete electrical system includes all disconnects and branch circuit fusing. Another feature of the CRU is that the unit has factory designed panels for making return and supply air connections at a different location other than directly below the unit.

New Air-Cooled Condenser Series

Sherrill also announced, for commercial and industrial applications, two new series of air-cooled condensers. The BU series includes two units rated at 10 and 15 tons, designed for roof-top or ground-level installation. These remote units consist of condenser coils, condenser fan with motor and drives, and electrical control panels housed in a weatherized cabinet. The BUVH series includes 10 models in ratings from 20 to 60 tons. These units provide either vertical or horizontal air flow.

J. Cerny, residential products sales manager, reviewed the 1961 product line in his area. It included:

New Humidifier

A new humidifier (model HR 2A) for forced air residential installation was introduced. A centrifugal atomizer, the unit is constructed of rustproof materials and uses less current than a 40-watt lamp. It can be adapted into full year-round residential humidity control. The unit can control humidity within close tolerances, and can easily be installed in the return air duct of any residential forced air system, Cerny said.

An electrical upflow furnace (type EUE) was also shown to the customer distributors. The unit will be available in early 1961 in two separate cabinet sizes: 40,000 and 60,000 Btu, and 80,000 and 100,000 Btu; the larger size furnace will provide the equivalent effective heat of a 125,000 Btuh input gas furnace, according to Cerny. The unit can be installed for either horizontal or vertical air flow.

Cerney indicated that the new and improved residential products were designed to implement the concept of "The Complete Westinghouse Comfort System." The concept includes providing equipment that will heat and humidify, clean, and cool and dehumidify—all with completely automatic control. In addition, it means marketing heating products that use all types of fuel, gas and oil, as well as electricity. Cerney reviewed the rest of the Westinghouse line of residential equipment: gas and oil furnaces; Precipitron electronic air cleaners; cooling equipment and heat pumps of the self-contained and split-system type; and humidifying and dehumidifying equipment (with reheat).

Carl Cannon, product sales manager, electric heating, reviewed the Westinghouse line of direct electric heating equipment that includes baseboard units, wall, floor, and bathroom models as well as electric unit heaters. He announced that all Westinghouse air conditioning wholesalers and many contractors will now market this complete line of equipment.

Said Cannon, "This move is natural in view of our seriousness of purpose in providing complete and true 'air conditioning.' Being professionals who treat air to provide comfort, our distributors want to carry complete lines of heating as well as cooling equipment—operating on electricity or fossil fuels."

Cannon added that a 3-ft baseboard section, and a new control unit would soon be added to the direct electric heating line.

Business Advisory Service Described

T. J. D. Dunphy, manager of marketing services, reviewed the division's marketing programs that will support the efforts of distributors in selling all the new and existing lines of products.

A unique Business Advisory Service was described and was the main theme of a Distributor Management Seminar on Nov. 14. This program consists of a series of booklets designed to counsel distributors on improved management techniques.

The program fills a void that exists for specific information on the problems of air conditioning contractors. "There are many textbooks and magazine articles that discuss subjects such as setting an effective price or managing cash," said Dunphy. "However, the textbooks cover business problems in general, and are not specifically applicable to the air conditioning industry. Our program was designed in conjunction with Fails & Shepherd Consultants and the business departments of several universities, and is based on over a year of studying the business operations of hundreds of air conditioning contractors and dealers."

In discussing the new service, Meckstroth stated, "Westinghouse is vitally interested in the profitable growth of our distributor organization as professionals in the air conditioning industry. Our customers have asked for counsel in solving their day-to-day business problems, and we feel that the business advisory service will give each of them helpful guidance in the management function of their business.

"In the '60's," he concluded, "profitable growth will belong to the managements who practice an improvement in management." It was emphasized that no amount of advice or help could ever detract from the distributor managers' right and responsibility to make decisions. "Management is one function that managers can't delegate."

1961 Training Program

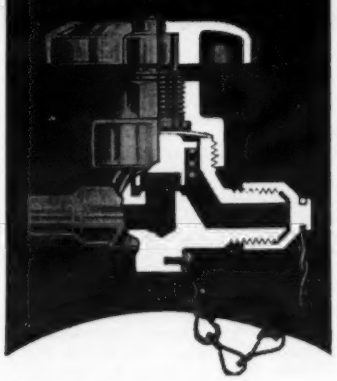
Dunphy reviewed the company's 1961 training program that combines the two requisites — effectiveness and wide coverage. It will involve a more complete plan of self study and field and factory training for the distributors. The highlight of the 1961 program will involve visits by trained factory teams to all regions of the country to present product training sessions.

Dunphy added that the division's 1961 promotional program was consistent with other marketing programs aimed at the professional air conditioning contractor. It is designed to be simple, easy to use, and effective. Two simple "Snow on the Ground" promotions were introduced, and will be implemented immediately by Westinghouse distributors. One covers commercial products, the other residential.

A very complete national advertising program in 1961 will emphasize the theme "See Your Westinghouse Pro."

Precision Designed for
REFRIGERATION and AIR CONDITIONING SYSTEMS

THE NEW KEROJET
CHARGE, PURGE and DRAIN
VALVE



- Costs Less
- Full open height only 2¼"
- Seal cap with chain attached
- 2½" diameter handwheel, colored for easy identification

Designed for ease of operation, this new valve features compact packless diaphragms of beryllium copper and stainless steel, for maximum resistance to wear. Rugged forged brass body has integral mounting flange. Maximum operating pressure, 500 p.s.i. Maximum temperature, 200° F. Connection size inlet ⅜" solder connection—outlet ⅜" male flare. See your Kerotest wholesaler today.

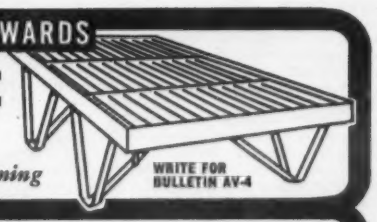
Ask for No. R224X1

KEROTEST

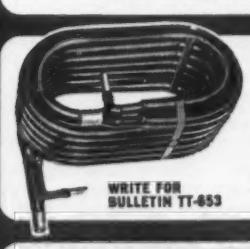
KEROTEST MANUFACTURING CO.
2502 Liberty Avenue
Pittsburgh 22, Pa.

ENGINEERED BY EDWARDS

AIRVEC
The completely silent Air Cooled Condenser
Never needs cleaning



WRITE FOR BULLETIN AV-4



WATER COOLED COAXIAL CONDENSERS
Domestic and sea water models
Reduce costs 40% . . . Reduce condenser water 35% . . . Reduce refrigerant charge . . . Stabilize capillary performance . . . Compact shapes.

WRITE FOR BULLETIN TT-653

MOTORIZED VALVES
For chilled water cooling systems and for heating systems . . . 100% positive shut-off . . . Compact . . . Low cost . . . Low Voltage . . . No current draw when open.

WRITE FOR BULLETIN MV-1

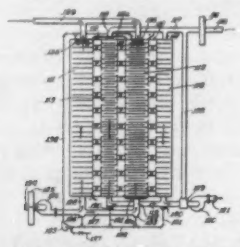
EDWARDS ENGINEERING CORP.
938-11 Alexander Ave., Pompton Plains, N. J.
TEmple 5-2808

"One of the nation's largest manufacturers of Residential and Commercial Boilers, Baseboard and Steel-Fin Radiation, Motorized Valves, Air and Water-Cooled Refrigerant Condensers."

PATENTS

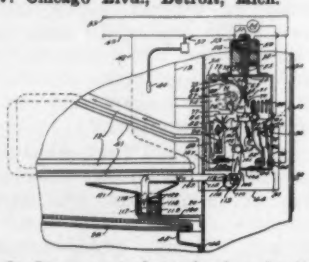
Week of Aug. 16

2,949,014. THERMOELECTRIC AIR CONDITIONING APPARATUS. Joseph F. Belton, Jr., and Leo Swerbinsky, St. Joseph, Mich., assignors to Whirlpool Corp., a corporation of Delaware.



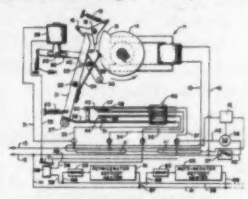
16. Heat transfer apparatus, comprising: a thermocouple panel having a pair of spaced sets of junctions one of which is cold and the other of which is hot when direct current is passed through said sets in one direction, these thermal conditions being reversed when said current is passed in the opposite direction, the one set of junctions including substantially flat, substantially coplanar, heat transfer members thermally exposed on one surface of the panel. . . .

2,949,016. DEFROSTING CONTROL MEANS FOR REFRIGERATION APPARATUS. Robert H. Thorner, 3410 W. Chicago Blvd., Detroit, Mich.



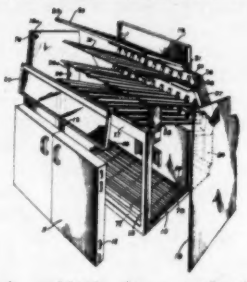
8. In a control mechanism having means adapted to be controlled dependent on the freezing of liquid, a device for controlling said controlled means, a fixed liquid-filled vessel associated with said device, said device including a sensing member immersed in said liquid and movable in a direction towards a wall of said vessel when said liquid is not frozen. . . .

2,949,017. TIME TEMPERATURE DEFROST CONTROL. Sven V. Swanson, Niles, Mich., assignor to Tyler Refrigeration Corp., Niles, Mich.



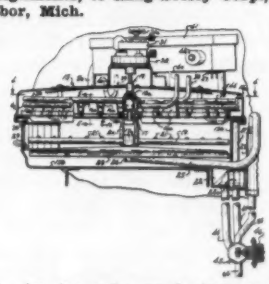
1. In a refrigerating system having a refrigerator coil, means for cooling said coil, and an electrically operated heater for defrosting the refrigerator coil, a defrost cycle control means comprising, a normally open circuit for energizing said heater, thermostatic switch means connected in series circuit with said heater for interrupting the same in response to a predetermined temperature of said refrigerating coil, a normally closed circuit for energizing said cooling means, timing means, first contact means controlled by said timing means for opening said cooling circuit, second contact means controlled by said timing means for closing said heater circuit. . . .

2,949,018. CABINET FOR MERCHANDISING PACKAGES OF FROZEN FOODS. Kendrick T. Parsell, 57 Sunset Drive, Manhasset, N. Y.



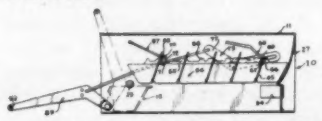
1. A cabinet for merchandising packages of frozen food which comprises a compartment adapted for the storage of packages of frozen food therein, a cover for said compartment, rack means laterally disposed in the upper portion of said compartment adapted to support a plurality of rows one above the other of packages of frozen food each of which rows extends from adjacent the rear of said compartment to adjacent the front of said compartment and extends beyond said cover for disposing packages supported by the forward end of said rack means in position displayed and accessible to purchasers. . . .

2,949,019. INVERTED MOLD APPARATUS FOR PRODUCING ICE CUBES. Benjamin K. Roberts, Lyle, Minn.; Esther G. Roberts, administratrix of the estate of said Benjamin K. Roberts, deceased, assignor, by mesne, assignments, to King-Seeley Corp., Ann Arbor, Mich.



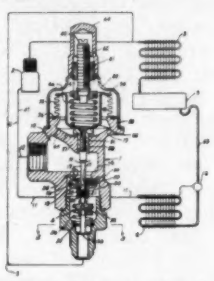
1. An ice cube producing machine comprising a sump tank, means defining a freezing compartment having a drain conduit communicating with said sump tank, a mold structure sealingly dividing said compartment into an upper and a lower chamber, a single conduit connected with the upper chamber and forming both a drain and an inlet conduit therefore, a water heater tank, conduit means delivering therefrom, a single multiple ported valve interconnecting said conduits to control the flow relationship therebetween and having a sump tank drain conduit connected therewith with an outlet drain conduit, said valve controlling communication between said drain conduits. . . .

2,949,020. ICE CUBE SHUCKERS. Frederick L. Erickson, South Houston, Texas, and Robert W. Pink, Evansville, Ind., assignors to Whirlpool Corp., St. Joseph, Mich., a corporation of Delaware.



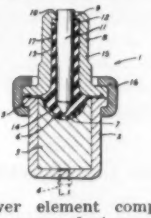
3. An ice cube shucker comprising: a support for holding an ice cube tray in an upwardly opening disposition; a grid for dividing the ice cube tray into a plurality of spaces, said grid comprising a plurality of movably associated partitions; a first lever pivotally mounted on the support and connected to said grid; and

2,949,128. VALVE. Franklyn Young Carter, Dearborn, Mich., assignor, by mesne assignments, to American Radiator & Standard Sanitary Corp., New York, N. Y.



A valve comprising a valve housing defining an inlet chamber, outlet chamber, and main port therebetween; a main valve element on the upstream side of said port for controlling main flow therethrough; a bleed opening through said main valve element; a cage structure carried by said valve element and defining an abutment surface in registry with said bleed opening; an auxiliary valve element floatably positioned within said cage structure for movement between the abutment surface and bleed opening. . . .

2,949,132. PRESSURE RESPONSIVE POWER ELEMENT. George Asakawa and Sergius Vernet, Yellow Springs, Ohio, assignors to Antioch College, Yellow Springs, Ohio.



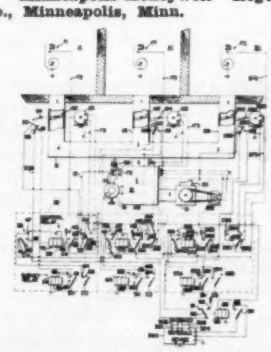
1. A power element comprising a cup; pressure-producing material within said cup; a concavo-convex diaphragm having its peripheral edge seated on the rim of the cup and having its central portion depending into the cup interior; an annular housing having an annular face clampingly seated on the diaphragm periphery and having an elongated tubular extension projecting axially away from the cup; an annular wall projecting radially inward from the terminal end of the extension to define an opening substantially smaller than the internal diameter of said extension. . . .

2,949,193. REFRIGERATOR SHELF CONSTRUCTION. Harold C. Mather, Knoxville, Ill., assignor to Midwest Mfg. Corp., Galesburg, Ill.

1. A shelf construction for a cabinet having rear and side walls including a rear socket member connected to the rear wall and having resilient compressible means therein and a front socket member secured to the side wall near the front of the cabinet, a guide rod having a rear end disposed in the rear socket member and having a front guide member disposed on

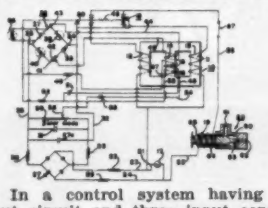
the other end, said guide member having means for locking engagement with the front socket member. . . .

2,949,234. ZONE TEMPERATURE CONTROL APPARATUS WITH SHIFTING AUTHORITY. Clarence W. Nessell, Mount Prospect, Ill., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.



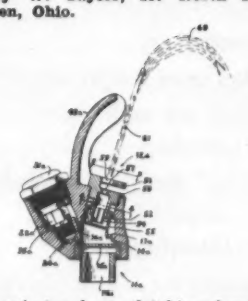
1. In a zone controlled air conditioning system having an air conditioning unit connected to supply conditioned air to a plurality of zones, each of which has an individual air supply duct; a movable air flow control damper in each of the ducts to control the flow of air therethrough, condition responsive means in each of the zones, each of said condition responsive means being responsive to the need for conditioned air in its respective zone, means connecting each of said condition responsive means in controlling relation to the flow control damper in the duct of its respective zone to thereby control the flow of conditioned air to its respective zone in accordance with the need therefore. . . .

2,949,237. MODULATING VALVE CONTROL SYSTEM. Andries C. de Wilde, Warren, Mich., assignor to General Motors Corp., Detroit, Mich.



1. In a control system having an output circuit and three input control circuits for controlling the signal obtained from the output circuit; a fluid control valve, a solenoid winding for operating said valve, said solenoid winding being connected in said output circuit, temperature responsive means producing a signal proportional to temperature for energizing one of said input control circuits. . . .

2,949,238. PROJECTORS FOR WATER DRINKING FOUNTAINS. Halsey W. Taylor, 137 North N.W., Warren, Ohio.



A projector for a drinking fountain, comprising a hollow body having an inlet connectable to a source of water and an outlet for issuing water in a stream for drinking purposes, a valve body carried at the side of said hollow body and having a valve bore the axis of which is at an angle of more than 90° to the axis of said inlet, and said bore having a valve chamber at its upper end, the lower end of said bore communicating by means of a first passage with the interior of said hollow body at a lower portion of the latter and said valve chamber communicating with the interior of said hollow body by means of a second passage disposed alongside said first passage and entering the interior of said hollow body at a point spaced upwardly from the entrance of said first passage. . . .

2,949,283. APPARATUS FOR HEAT TRANSFER. Millard F. Smith, Bayfield, Conn.

1. Temperature regulating apparatus for maintaining the temperature of heat-generating equipment within preselected and acceptable limits, comprising, in combination, a heat-conducting member in thermal contact with said heat-generating equipment and a plurality of bimetallic

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications $10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

MANUFACTURERS' REPRESENTATIVE — Experienced and successful wholesale air conditioning salesman is desirous of representing a manufacturer with a good and marketable product. If you want results in the New England area write particulars to BOX A6667, Air Conditioning, Heating & Refrigeration News.

REFRIGERATION SERVICE and installation man with 14 years' experience in air conditioning central systems, commercial and industrial applications in low, medium and high temperature. Also experienced in gas and oil heating. Can supervise when needed. Would relocate in Northeast part of country only. Write BOX A6669, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

DESIGN ENGINEER—Desire a graduate engineer with experience in sheet metal cabinet work, which would lend itself to commercial reach-in refrigerators. Must be capable of handling a project through design stage to production, including layout drawings and supervision of detail drawings. Salary commensurate with experience. Midwest location. Send resume to Personnel Manager, P. O. BOX 1356, Kansas City 15, Kansas.

RESEARCH AND development manager needed by Midwestern manufacturer of commercial reach-in refrigerators and allied lines. Position includes responsibility for laboratory program of research and development, supervision of laboratory personnel, and laboratory reports. Engineering background with full knowledge of refrigeration essential. Sheet metal knowledge helpful. Salary open. Send resume to Personnel Manager, P. O. BOX 1356, Kansas City 15, Kansas.

SALES ENGINEER for North New Jersey area to sell exclusive, sought after air conditioning and heating line to authorized dealer organization. Technical background with previous retail experience desired. Guaranteed salary and incentive bonus. Apply in writing to Sales Engineer, BOX 502 Allwood Station, Clifton, New Jersey.

EXCELLENT OPPORTUNITY for graduate engineer with experience in design and installation of air conditioning, from 5 to 150 tons. Must have or be able to qualify for Massachusetts Registered Professional Engineering License. Please submit complete resume with letter of application to DEE AIR CONDITIONING, INC., 65 Main Street, Springfield, Massachusetts.

MANUFACTURER'S REPRESENTATIVES for residential and small commercial year-round air conditioning. Twenty-five year old company. Factory southern location. Many desirable territories open. Give details — your present territories, lines, references. BOX A6633, Air Conditioning, Heating & Refrigeration News.

HEAT PUMP and air conditioning representative for state of Florida. Principal responsibilities include selling and training distributor personnel, contacting dealers and utility personnel. Must be familiar with application, installation, service and consumer relations as related to complete line of air conditioning and heat pumps for commercial and residential use. Manufacturer is growing and aggressively engaged in heat pump field. Position available on straight commission or salary, expenses and incentive arrangement. Write BOX A6664, Air Conditioning, Heating & Refrigeration News. Include complete resume and photograph.

REFRIGERATION INSTALLATION and service mechanic qualified on ammonia and Freon (mostly ammonia). Must be capable of taking charge on larger installations. Steady work and good pay for a qualified mechanic. Location Miami, Florida. BOX A6666, Air Conditioning, Heating & Refrigeration News.

SERVICE MANAGER for Chicago refrigeration and air conditioning contractor. Must be capable of complete supervision and control of 12 to 15 servicemen, satisfying existing accounts and developing new accounts essential to position. Excellent salary and incentive. All replies confidential. Our personnel know of this ad. BOX A6668, Air Conditioning, Heating & Refrigeration News.

FIELD SERVICE engineer—Our company is growing and expanding. We need and have opportunity for a capable, experienced, refrigeration service man, under 40 years to handle field service engineer responsibilities in limited territories in the Northeast, Midwest and West Coast area. Must be free to travel. Food store experience preferred. Willing to move at our expense, if necessary. High school (or better) education. Give full details, with five references, and send photograph with first letter. Applications without photographs will not be considered. Salary, expenses, insurance, welfare, and other benefits. BOX A6670, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT WANTED

WANTED: MANUFACTURERS surplus, outdated or obsolete refrigeration items—expansion & water & shutoff valves, controls, relays, dehydrators, units, tubing, fittings, etc. All sales on a cash closeout basis, large or small quantity. Write or call: COMMERCIAL CONTROLS, 1463 Crotona Place, Box 56, New York City. WY 2-5083.

BRUNNER COMPRESSORS—all models, used and repairable. Send description of model numbers and quantity. Also need other makes used compressors and parts. Will pay cash. UNITED REFRIGERATION CORP., 514 W. 12th St., Los Angeles 15, Calif.

EQUIPMENT FOR SALE

COMPLETE AIR conditioning systems in excellent working order—used. 1—250 ton, 1—100 ton, 1—60 ton, 1—30 ton, 1—25 ton, 1—10 ton, Carriers, Chryslers, etc.—fully equipped with controls. Export inquiries invited. COMMERCIAL CONTROLS, 1463 Crotona Place, Box 56, New York City.

ATTENTION REFRIGERATION Servicemen. Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

WE NEED AN ENGINEER-WRITER

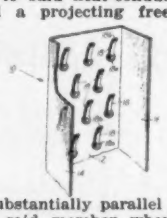
IF YOU

- — Are blessed with a technical turn of mind
- — Have a lively curiosity about new developments in this industry
- — Feel you have a good grasp of heating-cooling fundamentals and mechanics
- — Enjoy writing on technical subjects
- — Are presently employed in the industry
- — BUT FEEL IT IS TIME FOR A CHANGE

We may have a job for you on a leading industry publication. Our headquarters are in the Midwest; the writing job will call for some traveling.

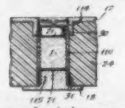
Send Resume to Box A6655, Air Conditioning, Heating & Refrigeration News

thermally-conductive heat-dissipating elements, each having a fixed end secured to said heat-conducting member and a projecting free end dis-



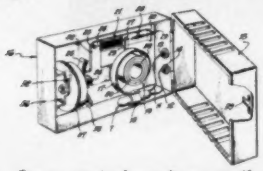
posed substantially parallel to the surface of said member when the temperature of said equipment is below a preselected value. . . .

2,949,497. THERMOELECTRIC ASSEMBLY. Lactance A. Jarvis and John B. Heinicke, Benton Harbor, Mich., assignors to Whirlpool Corp.



1. A thermoelectric assembly, comprising: a hollow dielectric connector; a pre-formed thermoelectric element within said connector; a pair of spaced apart terminal members fastened to said connector and positioned one adjacent each end thereof with one terminal member in electrically conducting relation with said element, the other terminal member being provided with an opening having cross sectional dimensions at least equal to those of the thermoelectric element to permit passage of the element therethrough. . . .

2,949,513. EFFECTIVE TEMPERATURE THERMOSTAT. Evan J. Davidson, North Hollywood, Calif., assignor to General Controls Co., Glendale, Calif.

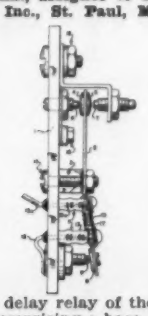


1. In a control system: a thermostatic member having means movable in accordance with temperature for accomplishing a controlling function; a support for the thermostatic member; means mounting the support for movement in a path having a component corresponding to the direction of movement of the movable means; resilient means urging the support in one direction; a strand hygrometer urging the support in the opposite direction and maintained taut by said resilient means; and means for adjusting the strand tensioning force exerted by said resilient means. . . .

2,949,514. CONDITION RESPONSIVE DEVICE. Roy W. Barthel, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

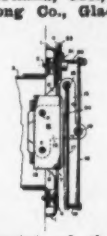
5. In a condition responsive device, a condition responsive element changing in position as a condition changes, means connected to respond to a change in position of said element, said means being connected to said element, a calibration lever attached to said element whereby the effect of the position of said element on said first mentioned means can be selected, a strain release means, means connecting said release means to said lever, and means for adjusting said means as said calibration level is adjusted to maintain said strain release substantially constant. . . .

2,949,518. THERMOSTATIC TIME DELAY RELAY. Marcus I. Nystuen, St. Paul, Minn., assignor to Economics Laboratory, Inc., St. Paul, Minn.



1. A time delay relay of the thermostatic type comprising a base, a mounting bracket secured to said base, a longitudinal bi-metal strip mounted at its midsection on said bracket so that its two ends can flex independently with respect thereto, a first movable contact carried on a first end of said strip, a first fixed contact positioned on the base in contacting alignment with said first movable contact, a heating coil secured to said strip between said first movable contact and said bracket. . . .

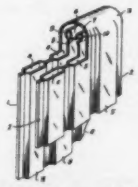
2,949,519. THERMOSTAT. Charles E. Armstrong, Portland, Ore., assignor to C. E. Armstrong Co., Gladstone, Ore.



1. A thermostat of the class described comprising in combination a base, a switching mechanism carried by the base and connected into a load circuit by electrical conductors extending into and looped within the base, a switching mechanism carried by the base, a first temperature sensitive element hingedly attached at one of its ends to the base and intermediate its ends in operative contact with the switching mechanism, a second temperature sensitive element hingedly attached intermediate its ends to the base and in contact at one of its ends with an adjustable cam surface upon the base and at its opposite end in contact with the opposite end of the first temperature sensitive element. . . .

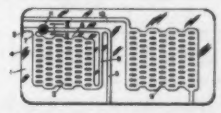
Week of Aug. 23

2,949,664. METHOD OF MAKING A HEAT EXCHANGER TUBE. Theron F. Pauls, Godfrey, Ill., assignor to Olin Mathieson Chemical Corp., East Alton, Ill.



1. The method of making a folded tube structure from a flat longitudinally laminated sheet metal blank having a first component strip superposed upon a second strip the lateral edges of which are integral with the lateral edges of said first strip and the intervening portion of which includes at least one longitudinally extending area of separation between the opposing walls of said strips defining a corresponding longitudinally extending embryonic passageway, which comprises the steps of deforming a portion of said blank intermediate the longitudinal ends thereof and transverse said embryonic passageway into a V-shaped first bend transverse said embryonic passageway. . . .

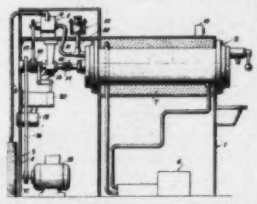
2,949,746. EVAPORATIVE RESTRICTOR. James A. Hall, Louisville, Ky., assignor to Reynolds Metals Co., Louisville, Ky.



3. In the art of making bonded-sheet passageway panels of the refrigerant evaporator type having a vertical wall section containing a receiver chamber having an upper inlet and a lower outlet, an improved method of manufacture comprising: providing said passageway panel with an inlet passageway extending along a straight line from an inlet opening in one edge of the panel to a predetermined point beyond a first branch connection with said upper inlet but short of a second branch connection with said lower outlet; providing, for the straight portion of said inlet passageway. . . .

2,949,748. APPARATUS FOR MANUFACTURING ICE CREAM. Sebastian Gangi, River Edge, N. J., assignor to Cidega Machine Mfg. Co., Inc., River Edge, N. J., a corporation of New Jersey.

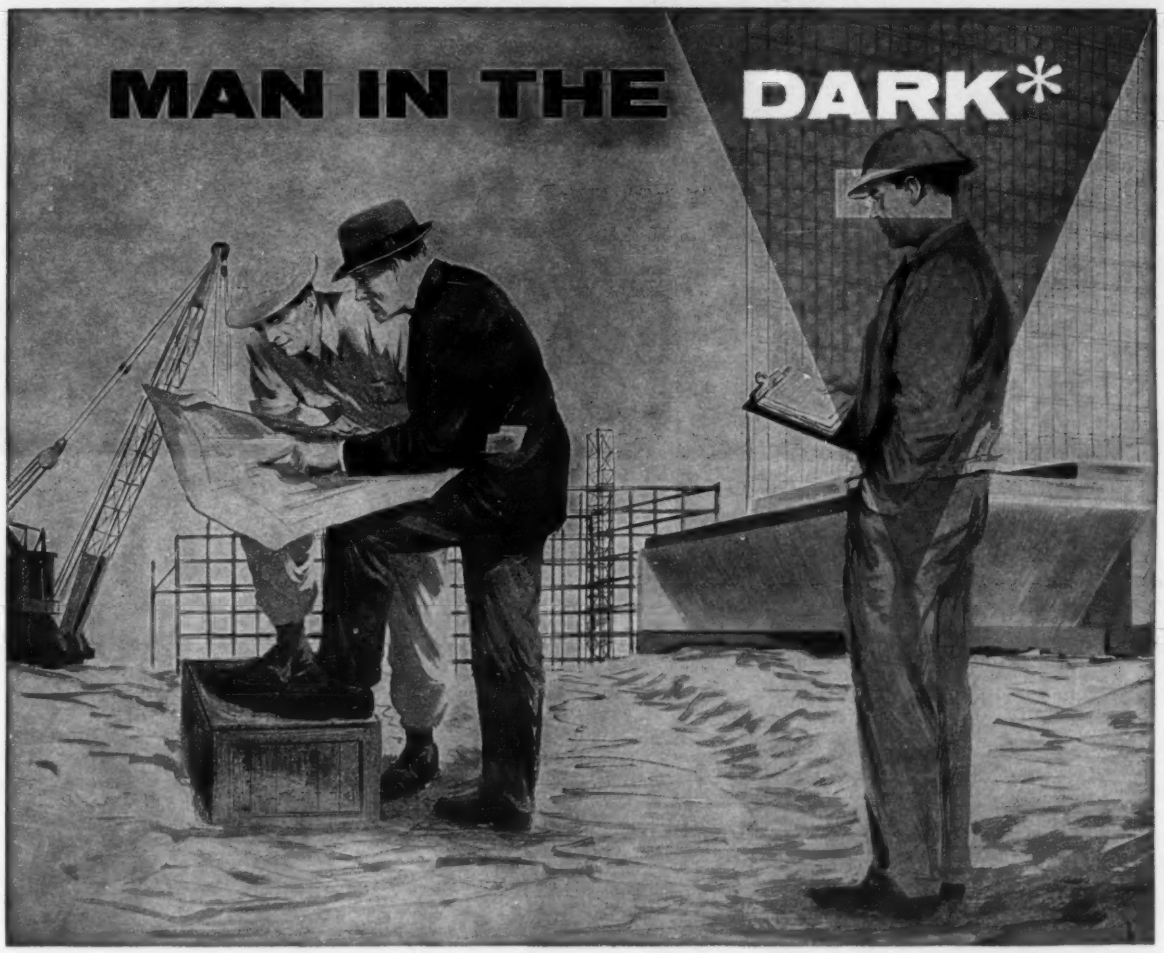
1. In an ice cream freezing device having a refrigerated hollow barrel and an agitator means in the refrigerated hollow barrel adapted to whip an ice cream mix into an air-filled ice cream, the combination of a source of ice cream mix positioned below the refrigerated hollow barrel, a supply line having one end connected to said source of ice cream mix and another end coupled to the refrigerated hollow barrel, a suction pump connected to



said supply line and positioned at a higher level than said source adapted intermittently to lift ice cream mix from said source to the refrigerated hollow barrel. . . .

(To Be Continued)

Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.



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Reaching these MARKETS	Serving these FIELDS
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Sept. Gas Heat Sales Up--

(Continued from Page 1, Col. 1)

continued efforts to promote home heating modernization are beginning to pay off.

Edward A. Norman, chairman of the GAMA house heating promotion committee, points out that while a good portion of the increase is seasonal, the 40.6% jump in sales of conversion burners since August must represent other than seasonal gains.

Shipments of the burners numbered 22,500 in September, compared to the 16,000 units shipped in August.

In the same period, sales of gas-fired furnaces increased 7.6%, from 96,600 to 103,900, and those of boilers went up 18%, from 16,435 to 19,394. Manufacturers do not report what portion of this was used in home modernization.

Home Construction Figures Give Clue

However, Norman points out, it is reasonable to assume that those units not installed in new homes were earmarked for modernization of older homes and a fair estimate can be made by comparing the volume of shipments to the rate of home construction. In September, for example, while sales of gas furnaces and boilers were running 9.1% ahead of August, the rate of home construction fell another 17%.

More evidence of the trend is revealed by comparing the September records to those reported for the same month of last year. While shipments of gas central heating units were down 15.8%, housing starts fell almost twice as much—29%, it was pointed out.

This pattern has continued throughout the first three-quarters of this year, Norman observed.

Combined shipments of the three types of gas central heating equipment totaled 872,958 in the January - September period of this year, 11.9% less than the 990,989 units reported for the first nine months of 1959. Home construction reports for the same periods show a 19% decline.

The industry spokesman, who is president of the Norman Products Co. of Columbus, Ohio, and a past president of GAMA, said:

"These figures support our prediction made earlier this year that 1960 would be the biggest year on record for home improvement. And, eventually, the gas equipment industry is enjoying a lion's share of this accelerated business.

"If this trend continues—and we have every intention of seeing that it does—we may soon realize our goal of making the gas equipment industry practically 'recession - proof' by building up a margin of regular home modernization business sufficient to cushion the effects of any future home building slump."

September and nine-month shipments of other gas heating equipment, as reported by Edward R. Martin, GAMA's director of marketing and statistics, were as follows:

Vented recessed wall heaters: September shipments amounted to 38,200, down 15.5% from 45,200 reported for September, 1959. Nine-month totals were 260,700 and 318,500 for 1960 and 1959, respectively, an 18.1% drop.

Room heaters and other types of gas direct heating equipment: This year's September sales numbered 126,000, down 44.1% from the 225,500 heaters shipped in the same month a year ago. In the first nine months of 1960 a total of 833,000 units were dispatched, a decline of 18% from the 1,015,300 sent to market in the same period of 1959.

Gas floor furnaces: The September figures were 13,900 for this year and 15,200 for last year, a decrease of 8.6%. The 1960 nine-month figure was 61,700, a decline of 11.4% from the 69,600 reported for the like months of last year.

Gas unit heaters and duct furnaces: The September report showed a decrease of 4.9% but shipments of this equipment were running 5.1% ahead of last year in the nine-month comparison. The one-month and three-quarter figures, respectively, were 15,400 and 111,800 for the current year and 16,200 and 106,400 for 1959.

Sign Agreement for Transitron Electronic To Buy Thermo-King; Await Approval

WAKEFIELD, Mass.—Transitron Electronic Corp. here and Thermo King Corp., Minneapolis, have entered into a formal agreement under which the former would acquire all assets of Thermo King, manufacturer of refrigeration equipment for trainer trucks, it was reported.

The agreement calls for Transitron to exchange one share of its common stock for each of the 900,000 shares of outstanding Thermo King stock. In addition, stock options for the purchase of 60,000 shares of Thermo King stock would be converted into options for 60,000 shares of Transitron, which would be the surviving firm.

The plan requires approval by holders of two-thirds of the outstanding stock of Thermo King. Approval of Transitron stockholders is not required.

The transaction also is contingent upon the carrying out of the proposed secondary offering of 1,250,000 shares of Transitron common stock covered by a registration statement filed with the Securities & Exchange Commission. This is an offering of stock owned by Leo Bakalar, chairman, and David Bakalar, president of Transitron.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

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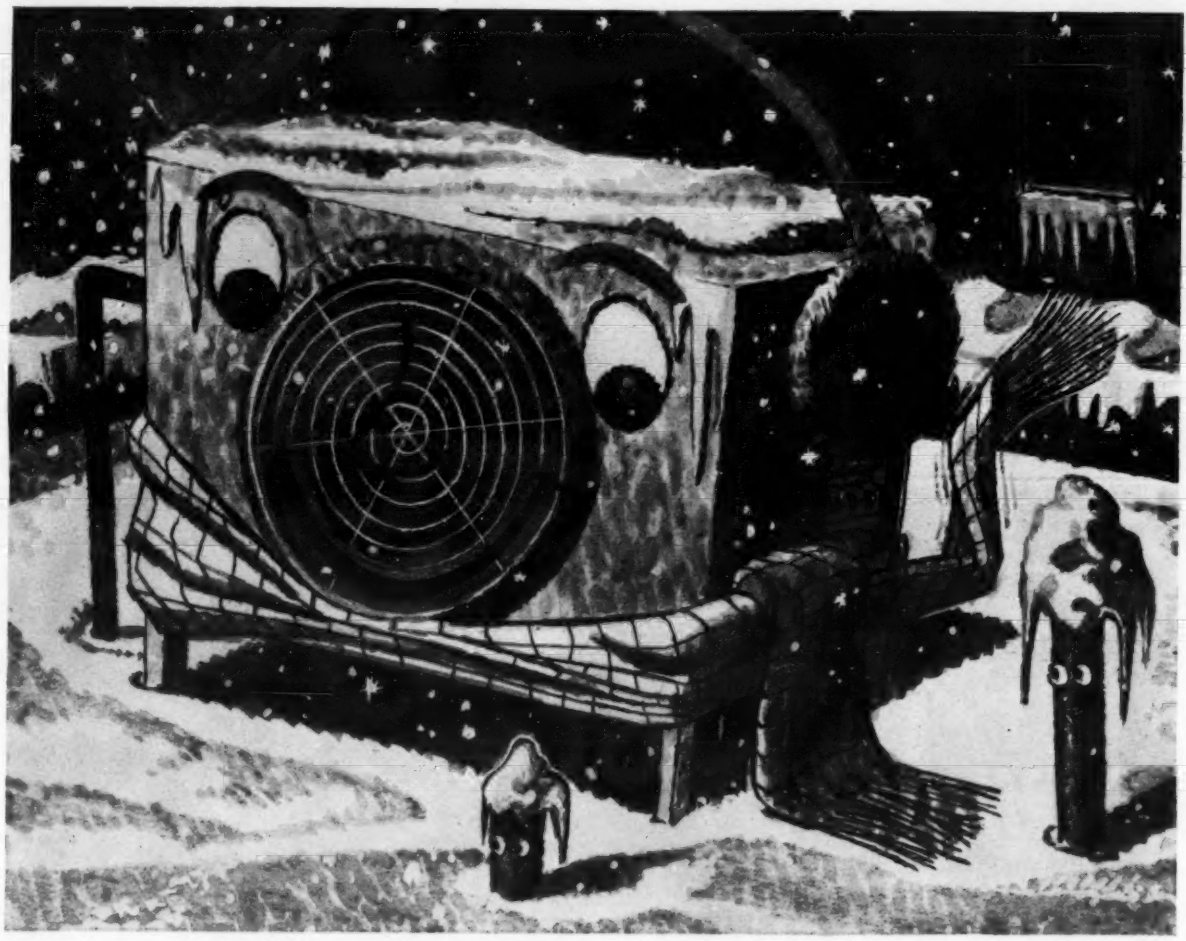

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